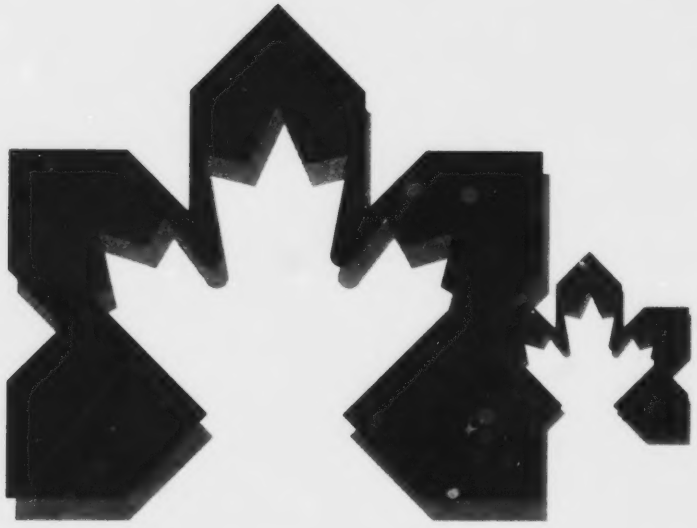
Canada Mortgage and Housing Corporation
Société canadienne d'hypothèques et de logement

Residential Renovation Overview

Program Evaluation Report



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RESIDENTIAL RENOVATION

OVERVIEW

Program Evaluation Division
Canada Mortgage and
Housing Corporation

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ABSTRACT

Residential renovation has been one of the growth industries of the 1970s and 1980s. As the federal government's housing agency, Canada Mortgage and Housing Corporation has a vital interest in the physical condition of the existing housing stock. For this reason, CMHC has been actively involved in the renovation field for many years. To address the lack of information on the renovation market, CMHC conducted national surveys of homeowners, landlords and tenants (the National Housing Study) and renovation firms (the Residential Renovation Industry Survey) in 1986. The main purpose of this study is to communicate the findings of these surveys and their implications for the renovation market.

Data from the National Housing Study indicate that 10 per cent of the existing low-rise housing stock is in need of major repairs. Based on ratings by building experts, it is also evident that occupants, particularly those with low incomes, tend to underestimate the repair requirements of their dwellings. Dwellings that are older, in the Atlantic region and occupied by low-income households are more likely to be in need of major repair.

The outstanding need for major repairs can be attributed in part to low-income (less than $20 000) homeowners who occupy 42 per cent of the owner-occupied low-rise stock in need of major repair. Such households require financial assistance through vehicles such as the Residential Rehabilitation Assistance Program (RRAP). For higher income households, inaccurate perceptions of the costs and benefits of renovating may lead them to avoid renovation work even though they occupy dwellings in need of major repair. Improved information on the benefits and returns to renovation as well as greater awareness of repair requirements on the part of consumers could enhance the renovation activity by such households.

The residential renovation industry is characterized by a large number of firms operating informally with relative ease of entry and exit. The average firm had 5 to 6 full-time employees and had been in business just over 10 years. Less than 30 per cent of the firms surveyed rated any single type of government regulation as having a significant cost impact on their renovation business. Access to loan or line of credit financing was cited as a problem primarily by newer, less established firms. With regard to renovation work carried out by firms, homeowners reported fewer problems with the quality of work than with the time taken to complete it. This suggests that improvements in business planning skills may be required.

Data on the use and usefulness of renovation information, for both consumers and firms, suggest that there is room for improvement in the information currently available. Efforts to

strengthen the effective transfer of accurate information through less formal channels would be appropriate since these are the most used and most useful means of conveying information on renovation.

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CHAPTER I
INTRODUCTION

As the federal government's housing agency, Canada Mortgage and Housing Corporation has a vital interest in the physical condition of the existing housing stock. Indeed, part of the Corporation's mandate, as expressed in the preamble to the National Housing Act, is "...to promote... the repair and modernization of existing houses..." CMHC has been actively involved in the renovation field for many years, operating rehabilitation subsidy and loan programs, establishing rehabilitation standards and training courses and conducting research.

The main purpose of this study is to provide new information on residential renovation in Canada as a basis for assessing the current and future role of CMHC in this area. The report provides a comprehensive review of residential rehabilitation activity in Canada. It examines the physical condition of the low-rise housing stock and the characteristics and behavior of firms and property owners participating in the renovation market. Primarily, the report focuses on evidence of market problems in order to isolate areas where government action may be appropriate. The suitability of current and recent federal programs is also examined in the context of the market problems identified.

A. STUDY CONTEXT

The need for a study of this type became evident when the Program Evaluation Division first considered an evaluation to assess the performance of CMHC and other government programs in addressing renovation/rehabilitation needs in Canada. The major impediment to conducting such a study was the dearth of information on the renovation behavior of property owners and the renovation industry. In the absence of this kind of data it was not possible to address such basic evaluation issues as the need for renovation programs.

To fill this information gap, CMHC has conducted national surveys of property owners, tenants, and firms in the renovation industry. These surveys provide a wealth of new information about participants in the renovation sector. They constitute the primary information base for this overview report on residential renovation. The surveys are described in Appendix A.

This report provides new information on the residential renovation sector. Renovation has become an increasingly

important aspect of the housing market. It now exceeds new residential construction in terms of annual expenditures by Canadians. Yet, little detailed, systematically collected information has been available on the characteristics and behavior of property owners according to the condition of their housing or on the structure and operation of the renovation industry.

B. STUDY APPROACH

The report begins by describing the nature and magnitude of renovation activity in Canada. It documents the rapid growth in renovation expenditures and presents a framework for assessing renovation and new construction alternatives for meeting changing housing demands. Next, the concepts and measurement of dwelling condition and repair needs are examined. Traditional indicators are reviewed and new data from a national survey of homeowners, landlords and tenants on the condition of their housing, which was conducted for this review, are presented. An important consideration here is the extent to which occupants may over or underestimate the condition of their dwelling when compared to ratings of qualified building experts. The new survey data provide a matched sample of occupant and expert ratings for analysis of this issue.

The evidence indicates that renovation need, as measured by the incidence of units in need of major repair, has persisted over time. The existence of outstanding repair need may be attributed to the low incomes of those occupying deteriorated units (equity considerations) or to market problems (efficiency considerations). The survey also provides measures of renovation activity including type of work done, reasons for doing the work and the demographics of renovating and non-renovating households. In addition, the study also provides new information on firms within the residential renovation industry from a national survey of residential renovation contractors. The survey provides measures of activity, composition and problems of firms involved in renovation.

Data from the surveys are used to provide insights into market problems in the residential renovation sector. Traditional analyses of market problems on both the demand and supply sides are reviewed and the new information is brought to bear on them. Among the potential problems examined are: the availability of financing; inadequate information; inappropriate government regulations; existence of externalities; and barriers to entry and exit from the industry.

Once problem areas are identified, the need for government action to address them can be considered. As the first step, it

is necessary to review the suitability and performance of current and recent federal programs in addressing renovation or other related problems. These range from the provision of home improvement loan guarantees, subsidies to enable low-income homeowners to carry out essential repair work, renovation subsidies to homeowners for the purpose of creating jobs and subsidies for energy conservation purposes, to support for housing research and information dissemination.

Having identified problems in the renovation sector and the suitability of present federal initiatives to address them, the study concludes by suggesting areas where government action, in concert with private initiatives, could continue to facilitate the efficient operation of the residential renovation market. As a first step toward specifying policy and program actions, a range of alternatives is identified for consideration.

C. STRUCTURE OF REPORT

The report begins by defining renovation activity and examining the nature of renovation decisions. Indicators of dwelling quality are reviewed in Chapter II, in order to develop estimates of the repair requirements of the existing housing stock. The operation of the residential renovation market is described in Chapter III, including the roles of property owners, renovation firms and government. Given that there appears to be a persistent outstanding need for major repairs which is not income related, Chapter IV attempts to identify problems which may be preventing the efficient operation of the renovation market. Next, Chapter V reviews the suitability and effects of recent government programs in addressing renovation and/or other related concerns. Chapter VI then outlines alternative actions which might be taken to address identified problems in the renovation sector. The final chapter provides a summary of the main findings and conclusions.

CHAPTER II
NEED FOR REPAIR

This chapter serves two purposes. First, it defines the nature and scope of the study. Residential renovation is viewed from three perspectives: as work which maintains or modifies housing conditions; as a type of consumer spending behaviour; and as a business function for firms. The role of renovation within the broader housing market is described by defining the major kinds of work which are collectively considered as renovation, then examining the size of the market for these activities based on past and projected trends in renovation spending. This is followed by a discussion of the factors affecting a property owner's decision to renovate. In a case study, the relative costs and benefits of renovation are illustrated.

The second purpose of the chapter is to provide an estimate of the repair requirements of the existing stock. A brief description of dwelling condition indicators and data collection techniques is given. Estimates are made of the number of units requiring repairs to meet minimum physical standards and the associated dollar cost of the work based on different approaches to measuring housing quality and different data sources. Emphasis will be placed on estimates from the National Housing Survey which was conducted for the purposes of this review.

A. ROLE OF RESIDENTIAL RENOVATION

1. Defining Renovation

Residential renovation represents the larger and faster growing yet less systematically studied segment of the housing market compared to new construction. Renovation activities can be most readily defined by identifying the ways in which the work influences the condition or state of a dwelling. Activities range in scale from on-going home maintenance, to minor and major repairs, replacements and improvements, to additions and conversion work.

The nature of each of these activities, in terms of their physical impacts, is as follows:

maintenance - sustaining a building in its current physical condition by regular cleaning and inspection for wear and tear;

repairs, replacements - increasing a building's physical safety or soundness by fixing or substituting new parts for those which are weak, worn out or damaged;

improvements - upgrading or modernizing a building beyond its original condition;

additions - increasing the size of a building by adding rooms or floor space;

conversions - changing the number of self-contained dwellings in a building or changing a building into a residential use.

Renovation may be done for social, economic or other reasons. Maintenance, repairs and replacements tend to be undertaken out of personal necessity, for improving health and safety. Keeping the housing stock in good condition also has social merit, demonstrated by public encouragement through local maintenance and occupancy bylaws. Improvements, additions and conversion work are more discretionary in nature, reflecting changing household circumstances and/or changes in tastes and lifestyle with increased income. Reasons for undertaking improvements and additions to dwellings are often rooted in consumer desire rather than need or necessity and reflect such factors as comfort, convenience, aesthetics and fashion.

From an economic perspective, the benefits of renovation may be in the form of reduced maintenance or operating expenses over the life of the building, of a longer building life, or of a greater capital gain upon sale of the property. The impact on the value and life of a building differs depending on the type of renovation work done. Over time, the value of buildings depreciates. However, renovation can delay or halt this decline. When maintenance is done, retaining safety or soundness, this type of renovation reduces the rate of physical deterioration. There will be a difference in the expected life of a well-maintained dwelling contrasted to a non-maintained dwelling. In both cases, the building depreciates over time, but the physical deterioration process is delayed under the maintenance option.

Repair and replacement work, as opposed to maintenance, reduces deterioration such that there is effectively no change in the quality of a dwelling over time. This effect on quality is the difference between maintenance and repair.

Repair and maintenance affect the quality and not the amount of housing. Renovation work that increases the quantity of housing services on a site includes additions - augmenting the size of existing rooms or constructing more rooms and conversions - changing the type of housing or use of the property to produce more units. Sometimes there is a greater demand for a property because of its location, rather than for the quality of the housing on it. In these instances, it makes sense to undertake

addition work rather than further improvements to the existing structure because the investment return is greater. There is an increased rate of return from adding space or rooms to a dwelling, reflecting a higher demand for more housing at a site. However, as indicated above, these decisions are not always based on a rational assessment of investment returns. Conversion work is undertaken, in an economic sense, as one way to offset a building's obsolescence. Conversion into or out of a residential use is done to capture the higher market rents/value of the alternate use. Changing the number or type of dwellings within the building is undertaken to obtain the most lucrative market mix of units. At the extreme, conversion may mean demolition and replacement[1]. Like additions, conversions increase the expected economic life of a dwelling.

Renovation, then, encompasses a broad range of activities undertaken to physically maintain or alter housing. The reasons for doing the work include health and safety considerations, social concerns, personal satisfaction and economic reward. Moreover, it is likely that a mixture of motives comes into play in many renovation decisions. The next section estimates the value of work done by examining renovation expenditure patterns over time.

2. National Renovation Expenditures

Total spending on residential renovation in Canada has increased dramatically in recent years primarily due to unprecedented increases in home improvement work. As shown in Figure 2.1, in 1982, overall renovation expenditures surpassed spending in the new construction sector of the housing market.

There has been a consistent trend to greater spending for home renovation work in the last decade, corresponding to the growth in the economy and in housing construction expenditures generally. While real family incomes have not grown significantly over the period, the value of housing, relative to other investments has remained high. The rising cost of new housing combined with the increased value of existing housing may be responsible for some of the increase in renovation as owners choose to stay and renovate their property.

Expenditures on renovation for materials and contracted labour grew from $1.7B in 1971 to $13.3B in 1986 (in constant dollars) based on the National Income and Expenditure Account estimates by Statistics Canada. Figure 2.1 shows that the majority of the

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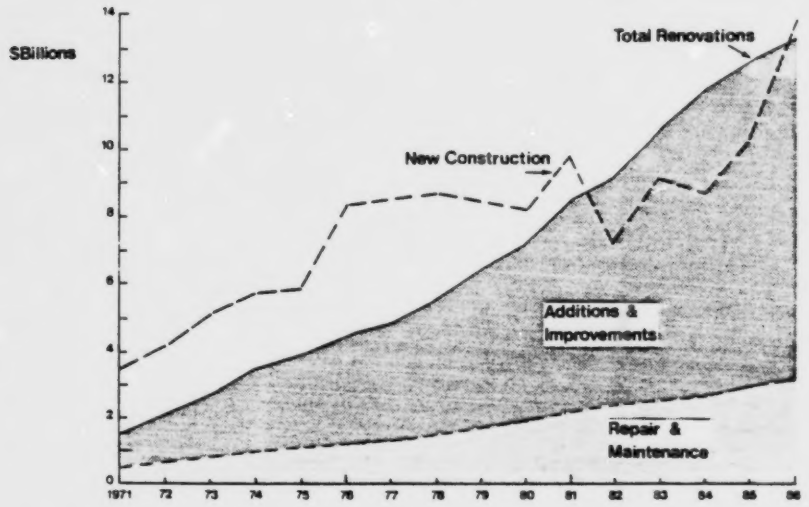
[1] In section 4 of this chapter, evidence is presented from a case study analysis to illustrate when it makes more sense to demolish and rebuild.

increase has occurred in the additions and improvements component of renovation. However, repairs and maintenance continue to represent almost one quarter of all expenditures on renovation. Adding on the total value of labour contributed by the do-it-yourselfer may augment the 1985 amount by as much as $3B[1].

FIGURE 2.1
RENOVATION AND NEW CONSTRUCTION EXPENDITURES, 1971-1986



SOURCE: National Accounts Data, Statistics Canada.

The material and labour estimate is derived by multiplying the average renovation expenditure for all homeowner households per type of renovation activity by the total number of households. The Family Expenditure (FAMEX) Survey, undertaken by Statistics Canada, provides the empirical data for the estimate.

The FAMEX survey shows that the per job expenditure amount has increased over time. In 1971, renovators spent an average of $500 per improvement job compared to approximately $1086 in 1985 (in constant 1985 dollars). In contrast, repair expenditures only increased by 10 per cent over the same period to an average of $335 in 1985.

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[1] CMHC estimate of value of do-it-yourself labour assuming a $5/hr wage rate and 30 hours per year, estimated from Canadian Time Use Pilot Study, 1981.

The trend to increased expenditures on renovation has been projected to continue over the next 15 years to an annual amount exceeding twenty billion dollars.

The projected higher spending is based on[1]:

- an expected increase in the housing stock (from 9 million to 11 million units by the year 2001). Since renovation work is undertaken on all types and ages of housing, an increase in the number of dwellings built generates additional renovation activity. Toward the end of the projection period, renovation expenditures should be less a function of increases in the number of units due to the anticipated lower household growth after 1991.

- an estimated higher average renovation expenditure per dwelling due to the continuation of the trend to greater spending on home improvement work (from $1086 per dwelling in 1985 to $1623 per dwelling for the 1996-2001 period). The projected modest rise in real incomes, decline in real mortgage interest rates and resultant increasing proportion of owner-occupied housing is expected to bolster spending on home improvements. It is also assumed that spending on repair work would remain relatively constant, a continuation of the 1971-1985 trend.

- a continuation in the trend to greater spending on renovation across all regions.

This discussion has shown that renovation is becoming an increasingly popular way of addressing changing housing requirements. The next step in describing the nature of this activity is to examine the factors that prompt property owners to choose renovation as the means of meeting this objective.

3. The Renovate/Move Decision[2]

When a property owner wants improved quality or a greater amount of housing he/she can bring about this change in one of two ways: renovating the current house or moving to another better

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[1] Clayton Research Associates, The Demand from Residential Renovation for Selected Wood-Based Products, a report prepared for the Department of Regional Economic Expansion, Sept., 1986.

[2] Hamilton, S.W. Government Involvement in Residential Renovation, a report prepared for the Program Evaluation Division, CMHC, 1986.

quality or larger dwelling. A third option would be to do nothing.

In general, a property owner would want to obtain the maximum improvement toward meeting his/her shelter requirement for the budget available. In order to make the best choice, the owner would calculate and compare the costs and benefits of the move versus renovate options. The economic criterion for deciding between the two would be to obtain the greatest net benefit.

When estimating the total costs of moving versus renovating, there are two type of costs to be estimated. First, there are capital costs. When moving, the purchase price of the replacement dwelling represents the major capital outlay. The dollar expense of hiring labour and/or buying materials represents the capital cost of renovating. Second, there are administrative expenses: sales commissions, legal fees, transfer taxes and sometimes storage and/or haulage costs are entailed in moving. In order to renovate there are the expenses of acquiring municipal building permits, depending upon the scale of work proposed, and inspection fees which vary with the nature of the work.

Benefits are the improvements in physical living conditions such as the improved health/safety of the occupants, longer physical life of the structure, lower maintenance and/or operating costs, improved physical appearance, increased comfort and convenience and better conformance to building standards. They can be quantified by estimating the likely selling price of the renovated dwelling.

In general, if the proceeds from selling the renovated dwelling are sufficient to cover on-going maintenance, administrative expenses and the cost of the work, then there is a net benefit to renovating. A net benefit from moving would result if the sale proceeds exceeded the purchase price net of the associated transaction costs, the remaining mortgage balance and the net cash from any reduction in operating expenses. If the net gain from renovating exceeds the overall net benefit from moving, then the consumer would choose to renovate.

Government regulations affect the magnitude of a number of items in this housing decision equation. The taxation of assessed property values, rental income, and capital gains, as well as rent control, can reduce the magnitude of the net gain from renovating or selling, as can the expense of conforming to property maintenance bylaws and construction standards. The impact of current public sector involvement on the extent to which property owners decide to renovate is examined in Chapter III.

Next, a case study approach is employed to illustrate specific applications of the cost/benefit criterion in deciding on the treatment of substandard dwellings.

4. Cost-Effectiveness of Residential Renovation

The choice among the housing consumption options of renovate/move/status quo was described in section 3 as being based on a comparison of costs and benefits over time. This section reports on a cost-effectiveness analysis undertaken in 1986 to demonstrate the net impact of the costs of two of these options on a property owner's return on investment and subsequent property improvement decision.

a) Renovation vs. Replacement

The cost-effectiveness analysis estimates and contrasts the dollar outlay requirements and opportunity costs of investing in the renovation versus the replacement of 23 substandard residential sites in four cities: Saint John, Montreal, Sault Ste Marie and Saskatoon. The cases were chosen from properties in the central city area which were rated at or below minimum property standards. Three owner-occupied single family dwellings, and three low rise (less than 4 stories) rental properties were selected in each city. The cases represent both a range of dwelling types and renovation/replacement opportunities, although all are in need of major repairs. Different housing markets were chosen to show the impact of market conditions on profitability.

The major factors considered in the analysis duplicate those which have been found in earlier studies to significantly influence the cost-effectiveness outcome:

- the initial physical condition of the buildings;
- the effect of each option on rent levels (imputed for owner-occupied units) discounted over the remaining life of the property at a rate reflecting the best return on an alternate investment, such as government bonds or treasury bills.
- the effect of each option on on-going maintenance and operating costs; and
- the effect of renovation or replacement on the physical life of the building.

The rent and operating expenses are estimated in constant real terms by discounting their future value over the projected remaining life of the building. A high discount rate brings

forward future costs to a lesser extent than a low discount rate. Therefore, an option that has relatively greater initial costs would be the preferred development alternative the lower the discount rate.

The two options costed in the analysis include:

i) renovating the property to meet CMHC Minimum Property Standards; or

ii) replacing the existing structure with a newly-constructed building meeting CMHC Minimum Property Standards, designed for the highest allowable density use under current zoning.

In practical terms, the option that results in the greatest improvement in cash flow net of maintenance and operating expenses and the renovating/replacement costs would be preferred.

Renovation was found to be the most cost-effective option for all of the 23 properties. The main reason for this outcome was that demolition and new construction would be considerably more costly than renovation and would yield only a modest reduction in expenses and gain in rents compared to upgrading. Varying the rate at which future expenses and revenues are valued in present terms changes the result very little. Only when this discount rate is very low (below 4.75 per cent) does renovation become cost-ineffective. At a discount rate of zero, replacement becomes the cost-effective alternative for 14 of the 23 properties.

b) Profitability

In addition to the cost-effectiveness criterion for ranking options, it is important to measure the extent to which the resultant change in net rents exceeds the capital cost, that is, the profitability of the options. From a government perspective, this would indicate the amount of increased rent revenue required to induce socially desirable renovation which private owners may not undertake if this option is either not profitable enough or unprofitable.

Although renovation is cost-effective compared to replacement, it is only profitable for about one-half of the sample sites at any discount rate higher than five per cent. For the remainder of the properties, the additional rent revenues would not be sufficient to cover the capital costs of the renovations. But, it would be even more unprofitable to provide upgraded accommodation by replacing the existing units with newly built housing.

The additional annual decrease in costs and increase in rents to encourage the renovation of these substandard and otherwise unprofitable-to-renovate properties ranges from $133 to $1 742 for owned properties and $361 to $1 381 for rental properties as shown in Table 2.1. Variations in the initial physical condition and the marketability of the dwelling are important influences on the profitability of renovation.

There are three cost considerations not quantified in this analysis which may encourage the owner to replace rather than renovate a building. First, the market demand may be stronger for a replacement dwelling unit type resulting in fewer vacancies and the new unit can therefore command a greater rent. In this case, there may be higher positive cash flow as a result of building new, favouring the replacement option.

Second, conversion is an alternative development response, that is, changing the number of units in a structure. The case study assumed that replacement would be at the highest density allowed, but not necessarily at the optimum unit combination. Renovating such that there are fewer units in a building but each with a higher unit area may be a combination which can command higher rents than the existing unit mix. Or, a conversion to increase the number of units overall may also be done to increase the total rental revenue.

Third, government regulations such as rent control and the comparative tax allowance differences on capital expenditure versus operating costs may favour the selection of one option over the other.

The next section of this chapter broadens the perspective from the social and financial decision framework of the individual property owner to the physical requirements for renovation based on existing housing conditions and the need for repairs.

TABLE 2.1
COMPARISON OF THE
ADDITIONAL NET REVENUE REQUIREMENTS TO
RENOVATE OR REPLACE SUBSTANDARD
DWELLING UNITS

CITY	PROPERTY TENURE	PER UNIT INCREASE REQUIRED(1) RENOVATION ($)	REPLACEMENT ($)
Saskatoon, Saskatchewan	1. Owned	0	1 002
	2. Owned	332	1 002
	3. Owned	0	1 002
	4. Rental	0	1 168
	5. Rental	0	2 803
	6. Rental	526	2 059(2)
Sault-Ste-Marie, Ontario	1. Owned	415	2 007
	2. Owned	0	2 201
	3. Owned	133	2 241
	4. Rental	0	1 642
	5. Rental	0	1 889
Montreal, Quebec	1. Owned	820	748(2)
	2. Owned	1 742	1 028(2)
	3. Owned	598	5 752
	4. Rental	361	2 027
	5. Rental	1 381	2 931
	6. Rental	0	973(2)
Saint John, New Brunswick	1. Owned	412	2 626(2)
	2. Owned	738	3 472(2)
	3. Owned	1 426	2 224(2)
	4. Rental	0	1 880
	5. Rental	0	3 683
	6. Rental	0	3 700

SOURCE: Harkness, J. Rehabilitation vs. New Construction, a report prepared for the Program Evaluation Division, CMHC, 1987.

NOTES:
1. Additional annual net revenue to induce owners to undertake work which otherwise would be unprofitable at a discount rate of 6 per cent.
2. Replacement costs calculated for highest density meeting local zoning allowance.

B. MEASURES OF DWELLING CONDITION

As noted in the previous section, the aging of the Canadian housing stock brings with it the potential for the deterioration of dwelling conditions if adequate levels of maintenance and repair investments are not sustained. In this context, the role of renovation as an amelioration measure is of critical importance.

Taken in this light, it is promising to note the considerable growth in residential renovation expenditures which has taken place in recent years. Renovation activity is diverse in character, however, both in terms of the types of work undertaken and the underlying rationale. For this reason it is difficult to determine the extent to which current renovation expenditures are responding to repair requirements created by the aging of the housing stock or to other priorities of the property owner. These include changing family/household composition, the need for barrier-free access for seniors and disabled persons, promoting the more efficient use of energy, personal preference or desires.

This section looks at the need for renovation related to the physical need for repairs in the existing housing stock. The notion of "need" implies that a distinction be made between those categories of potential renovation requirements which relate to established policy priorities (i.e. meeting health and safety standards, providing barrier-free access for the physically disabled, etc.) as opposed to those which may be more discretionary in nature, responding to changes in lifestyles or consumer tastes. It is the former segment of renovation requirements which will be the subject of the discussion of repair need which follows. Hence the principal focus will be placed on maintenance, repair and replacement requirements.

How large are the repair requirements of Canada's existing housing stock? This question is not easily answered. One of the principal obstacles to estimating repair need stems from the lack of universally accepted standards or measurement approaches. Another difficulty is presented by the general paucity of data required to provide accurate and reliable empirical estimates. Assessments of repair need will undoubtedly vary depending on who is making the evaluation and on the nature of the standards applied. Rather than pursuing a narrow definition from the outset, the approach taken in this section is to compare and contrast the results provided by a variety of subjective and objective indicators and approaches.

Traditionally, four approaches have been used to measure dwelling condition and to estimate need for repairs in the existing housing stock. These are basic facilities, need for repairs, dwelling component ratings and repair cost estimates. In this section, only a brief description of each approach will be given. Each approach, and the data sources which have been used to derive estimates, are described in Appendix B.

1. Basic Facilities

Measures of the presence of basic facilities (indoor plumbing) are available from Statistics Canada from the Census and HIFE surveys. As shown in Table 2.2, progressive improvements in housing quality have significantly diminished the relevance of the basic facilities approach to measuring housing quality. In 1985, only 1.5 per cent of dwellings lacked one or more basic indoor plumbing facilities. This is largely a rural condition. Older buildings and buildings in the Atlantic and Prairie regions exhibit higher than average incidences of absent facilities. The presence or absence of indoor plumbing has no reference to the quality or state of repair of the facilities nor to that of any other structural or mechanical system of the dwelling.

TABLE 2.2
DWELLINGS LACKING BASIC FACILITIES
AS A PERCENTAGE OF THE TOTAL HOUSING STOCK
1951-1985

LACK OF BASIC FACILITY	PROPORTION OF TOTAL STOCK					
	1951 (%)	1961 (%)	1971 (%)	1976 (%)	1980 (%)	1985 (%)
Piped hot and cold water	43.1	19.9	7.3	3.0	1.4	1.0
Exclusive use of flush toilet	35.9	21.0	6.9	1.8	1.0	0.8
Exclusive use of bathtub or shower	43.2	22.9	9.1	3.0	1.7	1.0
One or more of above	NA	NA	NA	4.2	2.0	1.5

SOURCE: Statistics Canada, 1981 Census of Canada, Microdata Tapes 'HIFE 1980' and 'HIFE 1985'.

NOTE: NA - Estimates not available.

While not directly comparable to the indicators discussed above, the National Housing Study also provides several indicators of the presence of basic facilities. In an attempt to limit the sample to "self-contained" dwellings, potential respondents who reported having common dining quarters or other shared facilities were screened out. The survey results indicate that 0.7 per cent of the dwellings remaining in the sample lacked complete kitchens (having a sink with piped water, a working refrigerator, and a range or stove). A smaller proportion (0.4 per cent) lacked complete bathrooms (having a flush toilet, bathtub or shower, and a washbasin with piped water). Together, 1.2 per cent of the dwellings surveyed in the National Housing Study recorded either one or both of these deficiencies.

Unlike HIFE or the Census, the National Housing Study also provides an indication of the quality of basic mechanical systems by measuring the frequency of equipment failures. As many as 12.7 per cent of the survey respondents reported that they had experienced a plumbing failure at least once during the preceding six months. The incidence of heating failures recorded during the previous winter was somewhat lower (at 8.9%).

The incidence of more chronic problems is reflected in the proportion of cases where breakdowns occurred more than once during the reporting period (during the previous winter for heating systems or the preceding six months for plumbing systems). Chronic problems were experienced with greater frequency for plumbing systems (6.7%) than for heating systems (2.6%). Together, 8.2% of the respondents reported experiencing a failure in either their heating or plumbing systems more than once during the course of the reporting period.

Frequently overlooked in discussions of basic facility requirements are those adaptations required by persons with physical disabilities. The National Housing Study recognized this concern and provides some initial findings with respect to this category of renovation need.

Survey respondents were asked whether they experienced any physical disabilities which required the installation of special structures or facilities in or around the home (e.g. wheelchair accessibility, grab bars, kitchen modifications, electronic intercoms etc.). Roughly one in every forty households surveyed (2.4%) responded that special facilities were required. One half of this group had managed to secure satisfactory dwellings or improvements. The remaining households (1.2% of the total) expressed a desire for modifications to their dwelling.

2. Need for Repairs

Measures of the need for repair in the existing housing stock are available from several sources. The Census and HFE surveys provide estimates for the overall housing stock. The National Housing Study estimates are based on a sample of the low-rise stock (four stories or less) only, which represents 91 per cent of the overall stock. Each survey asked if the dwelling was in need of any repairs with the following responses available: Yes, Major Repairs; Yes, Minor Repairs; No, Regular Maintenance.

Each source differs to some degree in question design and survey administration. Up to 1971, the Census used enumerators to administer the survey question on need for repairs. Since 1981 the Census has been self-completed. The HFE Survey has used trained interviewers to administer the survey question on need for repair. Response order and specific repair examples differed for each survey; the Census offered maintenance first, HFE offered major repair. The National Housing Study used the HFE question order and the self-completion method of the Census. Trained building experts were used to obtain physical assessments of a sample of the dwelling units surveyed.

Table 2.3 compares estimates of repair need derived from the three data sources. All three yield similar estimates of the proportion of the Canadian housing stock requiring either major or minor repair. The data suggest that roughly one in every three to four dwellings require some amount of repair work, while the remaining portion of the stock is in need of regular maintenance only. Depending on which data source is used, between 1.96 million (1981 Census) and 2.30 million (HFE 1982) dwelling units were in need of repair in the early 1980s.

TABLE 2.3
RELATIVE INCIDENCE OF REPAIR REQUIREMENTS BY TENURE

	MAJOR REPAIRS (%)	MINOR REPAIRS (%)	MAJOR OR MINOR REPAIRS (%)	REGULAR MAINTENANCE (%)
ALL DWELLINGS				
Census (1981)	6.7	17.0	23.7	76.3
HFE (1982)	12.9	14.9	27.8	72.2
HFE (1985)	12.5	13.9	26.4	73.6
NHS (1986)	10.0	25.1	35.1	65.0
HOMEOWNERS				
Census (1981)	6.1	17.2	23.3	76.7
HFE (1982)	14.2	14.1	28.3	71.2
HFE (1985)	13.4	12.5	26.0	74.0
NHS (1986)	8.6	21.5	30.1	69.9
RENTERS				
Census (1981)	7.5	16.7	24.2	75.8
HFE (1982)	10.8	16.5	27.3	72.8
HFE (1985)	10.9	16.1	27.0	73.0
NHS (1986)(1)	13.1	32.8	45.9	54.1

SOURCE: Statistics Canada, 1981 Census of Canada, Cat. 92-932; Microdata Tapes 'HIFE 1982' and 'HIFE 1985'; National Housing Study, CMHC, 1986.

NOTE: 1. The National Housing Study also provides need for repair ratings from the landlords of rental properties: major repair - 11.7%, minor repair - 23.2%, regular maintenance - 65.1%.

While there is agreement between the Census and HFE data with respect to the proportion of the stock in need of repairs in general terms, they provide markedly different estimates of the relative severity of repair requirements (i.e. the proportion of the stock in need of major as opposed to minor repairs). For example, the Census reported that 551 755 dwellings (6.7% of the total housing stock) were in need of major repairs in 1981. Estimates of major repair requirements drawn from the 1982 HFE Survey (1 063 000 units or 12.9% of the stock) are approximately double those derived from the Census.

The HFE and Census data also provide conflicting results with respect to the relative severity of repair need among owned and rented dwellings. While the 1981 Census data suggest that

rented dwellings had a slightly higher incidence of major repair requirements than the owner occupied stock, data drawn from the HFE surveys suggest that the reverse is the case.

It is not entirely surprising that the HFE and Census data bases yield different estimates of repair needs. Although both surveys ostensibly measure the "need for repairs", there are differences in the wording used in the survey instruments, the ordering of the response categories, the sample size and data collection technique (drop off and pick up versus interviews). Each of these factors is likely responsible for a portion of the deviation between the estimates of repair need derived. It is beyond the scope of this review to undertake an assessment of the comparative accuracy of the two estimates.

A comparison of the HFE and National Housing Study samples suggests that the proportion of dwellings in need of some type of repair work (either major or minor) was higher among low rise structures than in the total housing stock. Roughly one in every three low rise dwellings were found to require some type of repair work, compared with one in every four dwellings in the stock at large. This is a reflection of the generally better conditions prevailing in structures with five stories or more (which are of comparatively more recent construction). The higher incidence of overall repair requirements in the low rise stock appears to be largely due to greater minor repair requirements and the poor condition of low rise rental dwellings in particular.

Table 2.4 presents more detailed information on the state of repair of the low rise stock. With the exception of tenure groups, the relative incidence of repair requirements within the low rise stock conforms to the trends exhibited in the stock at large. Above average major repair requirements prevail in the low rise rental sector and in the stock constructed prior to 1941. Although the incidence of major repair requirements is higher in Atlantic Canada and in rural areas of the country, the majority of dwellings in need of major repair are found in Central Canada and in urban areas. The incidence of need for minor repairs is more evenly distributed among the regions and dwelling age categories.

TABLE 2.4
REPAIR REQUIREMENTS IN THE LOW RISE STOCK:
OCCUPANT-PROVIDED ASSESSMENTS

	MAJOR REPAIRS		MINOR REPAIRS	
	INCIDENCE (%)	DISTRIBUTION (%)	INCIDENCE (%)	DISTRIBUTION (%)
ALL DWELLINGS	10.0	100.0	25.1	100.0
TENURE				
Owned	8.6	58.4	21.5	58.5
Rented	13.1	41.6	32.8	41.5
REGION				
Atlantic	13.8	12.1	24.8	8.7
Quebec	8.6	22.9	24.3	25.8
Ontario	11.1	36.9	25.6	33.8
Prairies	9.2	17.2	25.7	19.2
B.C.	8.6	11.0	24.6	12.6
SETTLEMENT SIZE				
Urban	8.2	56.2	24.2	69.8
Rural	14.0	43.8	22.9	30.2
PERIOD OF CONSTRUCTION				
Before 1901	20.5	18.9	26.9	9.5
1901-1920	20.8	12.4	33.6	7.7
1921-1940	15.6	16.1	30.6	12.1
1941-1960	9.7	25.3	28.5	28.6
1961-1980	5.2	25.4	19.9	37.3
1981-1986	2.9	2.0	12.1	4.7
n=	1 112		2 638	

SOURCE: National Housing Study, CMHC, 1986.

A review of the need for repair status of the housing stock constructed in the 1960s, 1970s and 1980s reveals that repair need is by no means restricted to the oldest dwellings. This segment of the housing stock comprises a significant proportion of total repair requirements (27.4% of major repairs and 42% of minor repairs). The incidence of minor repair requirements among dwellings constructed in the first half of the 1980s (12.1%) underscores the fact that housing maintenance and repair are worthy of attention right from the outset.

3. Dwelling Component Ratings

The previous section has examined the magnitude of repair requirements in fairly general terms, that is, major repairs, minor repairs or regular maintenance. As a guide to informed action, however, more specific information is required to determine which dwelling components are in greatest need of attention.

The National Housing Study is the only data source which provides up to date and comprehensive information pertaining to the condition of individual components of dwellings in the low rise stock. As was the case with assessments of the need for repair, detailed component ratings are provided from several sources: occupants, landlords and trained building experts.

Homeowners and landlords responding to the National Housing Study were asked to rate the condition of 14 different components of their dwellings' exterior, interior and mechanical systems on a seven point scale[1]. Renters provided condition ratings for 8 interior and mechanical system components and a global rating for building exteriors. A score of three or less was assigned to components which the respondents judged to be less than the "minimum acceptable". The survey results are presented in Table 2.5.

Homeowners most frequently rated roofs and doors/windows below the minimum acceptable condition followed by sitework, attached structures and insulation. Insulation, flooring and wall surfaces were most frequently cited by tenants. Landlords identified the same substandard components as both homeowners and tenants. The component ratings confirm the lower overall rating of rental units as compared to homeowner units. Of the three component categories, exterior components were most often judged to be less than the minimum acceptable, followed by interiors and mechanical systems.

1

13.a) **Please rate the dwelling's general physical condition by circling the appropriate number on each of the following scales. If you are unsure about the condition rating please circle number 9.**

	BEYOND REPAIR			MINIMUM ACCEPTABLE		PERFECT CONDITION	DON'T KNOW
Attached Structures (e.g., steps, porches)	1	2	3	4	5	6	7	9

TABLE 2.5
DWELLING COMPONENT CONDITION RATINGS: RESPONDENTS

	INCIDENCE OF COMPONENTS JUDGED BY RESPONDENT TO BE BELOW MINIMUM ACCEPTABLE CONDITION(1)		
	HOMEOWNERS (%)	TENANTS (%)	LANDLORDS (%)
EXTERIOR		9.2(2)	
Sitework	8.5	-	9.4
Outside Walls	4.4	-	5.4
Roof	9.6	-	11.5
Chimney	5.1	-	5.7
Doors/Windows	9.7	-	10.1
Attached Structures	8.6	-	9.5
INTERIOR			
Finished Carpentry	5.6	11.5	7.9
Flooring	6.8	19.4	10.0
Drywall/Plaster	4.8	14.6	7.6
Wall Surfaces	5.7	15.6	7.3
Insulation	8.8	26.6	12.4
MECHANICAL SYSTEMS			
Electrical	4.0	10.9	6.1
Heating/Cooling	2.5	9.4	4.2
Plumbing	3.9	13.6	7.2
Number of Cases	7 091	2 116	700

SOURCE: National Housing Study, CMHC, 1986.

NOTES:
1. Minimum acceptable condition was defined as a rating of 4 on a 7 point scale from 1 - Beyond Repair to 7 - Perfect Condition.
2. Renters provided only a global exterior condition rating.

Summary information concerning the number of unacceptable dwelling components are contained in Table 2.6. Over two thirds of the dwellings had no components which were rated below minimum acceptable conditions and only a small proportion of dwellings have more than one unacceptable component. A clear relationship appears to hold between the number of dwelling components judged to be unacceptable and the need for repair ratings established by the survey respondents.

TABLE 2.6
DWELLING COMPONENT CONDITION RATINGS:
HOMEOWNERS, TENANTS AND LANDLORDS

	AVERAGE NUMBER OF "UNACCEPTABLE" DWELLING COMPONENTS	DISTRIBUTION OF DWELLINGS BY NUMBER OF "UNACCEPTABLE" DWELLING COMPONENTS			
		0 (%)	1 (%)	2 OR MORE (%)	(n)
HOMEOWNERS	0.8	71.5	12.1	16.4	6 079
Major Repairs	3.4	16.4	15.0	68.6	474
Minor Repairs	1.4	48.4	19.5	32.1	1 207
Regular Maintenance	0.3	84.0	9.7	6.4	4 277
LANDLORDS	1.1	66.2	13.3	20.5	566
Major Repairs	3.5	18.7	15.9	65.4	59
Minor Repairs	1.7	49.4	11.6	39.0	133
Regular Maintenance	0.4	80.8	13.5	5.7	363
TENANTS(1)	1.2	55.1	15.3	29.6	1 882
Major Repairs	3.2	15.4	13.9	70.7	233
Minor Repairs	1.6	38.9	18.6	42.5	593
Regular Maintenance	0.5	75.1	13.5	11.4	1 000

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Homeowners and landlords provided ratings for 12 individual dwelling components. Tenants rated only 8 components (comprising dwelling interiors and mechanical systems only). Tenants did not provide individual ratings for exterior components.

Detailed assessments of dwelling conditions were also provided for a sample of the surveyed dwellings by trained building experts. Ratings were provided for a much more extensive list of dwelling components (33 in all) than those considered by occupants and landlords. As in the case of the survey-based assessments, the dwelling components were rated against a seven

point scale1. However, while occupants and landlords were asked to provide subjective evaluations of the "acceptability" of dwelling component conditions, the building experts made use of objective standards in assigning condition ratings. The standards applied were those established for use by the federal Residential Rehabilitation Assistance Program (RRAP). The RRAP standards are intended to represent minimum acceptable standards with respect to health and safety. A score of three or less was assigned by the building experts to any dwelling component which did not meet or exceed the RRAP standards.

The condition ratings assigned by the building experts to individual components are presented in Table 2.7. The concerns of occupants with the condition of insulation and doors and windows were substantiated by the experts' assessments, exhibiting the highest incidence of substandardness among the components evaluated. The experts also found the same incidence of evidence of water entry. Other problem components with high levels of substandardness were attached structures, exterior wall surfaces, soffits, fascia and attic ventilation, basement waterproofness and interior stairs. The experts judged dwelling exteriors and interiors to be in worse condition than mechanical systems.

Table 2.8 provides a summary of the number of substandard components identified by the building experts. Half of the owner occupied dwellings assessed were found to have no substandard components. A smaller proportion (roughly one third) had more than one substandard component. On average, fewer than 2 substandard components per dwelling were identified for the owner occupied stock. In comparison, dwellings assessed to require major repairs had an average of 6.3 substandard components.

1

8. [EXSW1] ☐

Provide a general rating of the condition of all exterior porches, balconies and other attached structures (e.g., in terms of evidence of hazards, unsoundness, deterioration, missing stairs, handrails, etc.).

NA

1 2 3 4 5 6 7 8

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(totally replace) (top condition)

COMMENTS

TABLE 2.7
INCIDENCE OF SUBSTANDARD COMPONENTS: EXPERTS' RATINGS

COMPONENT	SUBSTANDARD COMPONENTS	
	HOMEOWNER (%)	RENTAL (%)
EXTERIOR		
Attached structures	12.4	7.2
Surface drainage	8.5	6.3
Lot upkeep	2.9	1.0
Exterior foundation (structure)	8.2	3.0
Exterior walls (surface)	10.1	10.8
Exterior walls (structure)	2.7	0.0
Chimney (structure)	7.4	6.3
Doors and windows	12.6	15.0
Roof (surface)	6.0	6.7
Roof (structure)	3.0	2.5
Flashing	4.1	5.5
Soffits, fascia, attic ventilation	10.7	10.7
INTERIOR		
Basement floor	4.3	0.6
Interior foundation walls	5.0	5.0
Joints, posts, beams	6.5	5.8
Waterproofness of basement	9.3	7.5
Insulation	17.3	12.1
Fire hazards	7.0	4.3
Basement ventilation	7.3	8.6
Floors (surface)	4.7	5.1
Floors above basement (structure)	4.2	1.9
Floors above ground	2.4	0.9
Interior stairs	9.7	2.5
Interior walls and ceilings	7.9	8.5
Water entry (1)	18.3	14.2
MECHANICAL SYSTEMS		
Furnace condition	2.5	3.1
Heat distribution system	2.3	2.5
Wiring	2.5	0.5
Electrical system (overall)	2.9	0.7
Water pipes and supply system	4.3	7.4
Plumbing (overall)	3.0	2.5
Bathroom equipment	2.3	2.0
Bathroom ventilation	6.1	4.7
Number of cases	1 276	90

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Not measured on a 7-point scale.

TABLE 2.8
NUMBER OF SUBSTANDARD DWELLING COMPONENTS: EXPERTS' RATINGS

TENURE AND NEED FOR REPAIRS(1)	AVERAGE NUMBER OF SUBSTANDARD COMPONENTS	DISTRIBUTION OF DWELLINGS BY NUMBER OF SUBSTANDARD COMPONENTS			(n)
		0 (%)	1 (%)	2 OR MORE (%)	
OWNER OCCUPIED	1.8	50.5	15.8	33.7	626
Major Repairs	6.3	0.8	8.1	91.1	111
Minor Repairs	2.5	20.3	21.3	58.4	189
Regular Maintenance	0.4	77.7	15.0	7.3	325
RENTAL	1.6	43.2	12.5	44.3	35

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Need for repair rating assigned by building experts.

4. Estimates of Repair Costs

Having discussed aggregate repair requirements as well as the specific nature of dwelling components requiring attention, we now turn to examine the magnitude of investment required to rectify substandard housing conditions. As part of the National Housing Study, building experts were also requested to provide estimates of the dollar value of labour and materials required to bring substandard dwelling conditions up to the RRAP standards[1].

The average cost of bringing owner occupied units up to standard was estimated to be $3 396. Unfortunately, the small sample size of rental inspections with cost estimates precludes a detailed analysis of the repair costs associated with bringing the rental stock up to standard. For this reason, the following discussion is restricted to owner-occupied dwellings only.

[1] Repair cost estimates are only available for 55.4% (955) of the homeowner properties which were inspected and 49.0% (71) of the rental properties. Dwellings with zero repair expenditure requirements were excluded from the calculation of average repair costs.

Mean and median repair cost estimates are provided in Table 2.9 for selected dwelling characteristics. Rural dwellings and dwellings constructed before 1940 had both higher mean and median cost estimates. This could account for the higher estimates for the Atlantic region, followed by Quebec.

The magnitude of repair requirements of the owner occupied stock are outlined in greater detail in Table 2.10. A comparison of the mean and median repair expenditures required shows that the distribution is skewed towards the lower expenditure categories. Sixty per cent of the substandard owner occupied stock identified by the building experts required less than a $2 000 investment to meet minimum standards. Approximately one quarter of the dwellings inspected required repairs costing less than $500. At the other extreme, one fifth required more than $5 000 in repairs. Among building components, dwelling exteriors required the greatest average repair expenditures, followed by dwelling interiors and mechanical systems.

Table 2.11 presents the repair cost estimates associated with the three categories of repair need. The repair need ratings of both homeowners and building experts are included for comparison. Dwellings identified by homeowners to be in need of major repair required an average of $6 989 to bring up to standard. Those dwellings identified by the experts to be in need of major repairs required an average of $7 823 to bring up to standard.

It is important to note, however, that even dwellings deemed to be in need of regular maintenance only, whether by the occupants or the experts, do in fact require more than nominal expenditures to eliminate substandard components. This suggests that dwellings in need of major repairs are not necessarily the only component of the housing stock worthy of policy attention.

5. Comparison of Occupant and Building Expert Ratings

The preceding analysis of repair requirements was based primarily on estimates of dwelling condition which were provided by their owners and occupants. Previous research indicates that such assessments may not provide entirely reliable measures of the need for repairs[1]. The ability of occupants to accurately assess the condition of their dwelling, compared to trained experts may be influenced by a variety of factors including technical competence, length of occupancy, community norms and consumer expectations. In order to check the accuracy of

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[1] Ekos Research Associates, Pilot Study of Physical House Condition and Rehabilitation Need, a report prepared for CMHC, April 1981.

TABLE 2.9
COSTS OF REPAIRS REQUIRED TO BRING OWNER-OCCUPIED DWELLINGS UP TO STANDARD: BY REGION, PERIOD OF CONSTRUCTION AND BUILDING TYPE

SELECTED DWELLING CHARACTERISTICS	(n)	MEAN ($)	MEDIAN ($)	STANDARD ERROR OF MEAN ($)
REGION				
Atlantic	344	4 261	2 270	282
Quebec	222	3 505	1 500	372
Ontario	99	3 283	1 150	668
Prairies	200	3 274	1 350	378
B.C.	85	2 063	800	352
SETTLEMENT TYPE				
Urban	487	2 478	1 100	170
Rural	399	4 992	2 100	394
PERIOD OF CONSTRUCTION				
1961-1986	433	1 972	970	166
1941-1960	236	2 971	1 800	291
1921-1940	101	4 956	3 105	602
1901-1920	53	4 660	3 550	687
Prior to 1901	132	7 713	3 289	911
BUILDING TYPE				
Single detached	869	3 551	1 600	201
Other	86	1 867	1 203	250
ALL	955	3 396	1 600	185

SOURCE: National Housing Study, CMHC, 1986.

TABLE 2.10
DISTRIBUTION OF COSTS OF REPAIRS REQUIRED TO BRING OWNER-OCCUPIED DWELLINGS UP TO STANDARD

COSTS OF REQUIRED REPAIRS	EXTERIOR (%)	INTERIOR (%)	MECHANICAL SYSTEMS (%)	TOTAL (%)
$1-$499	32.3	33.3	41.0	25.3
$500-$999	18.3	19.1	17.9	16.3
$1 000-$1 999	18.3	18.1	19.1	18.6
$2 000-$2 999	8.9	9.3	11.5	8.9
$3 000-$3 999	8.0	5.5	3.7	7.0
$4 000-$4 999	2.6	5.6	2.6	5.2
$5 000-$9 999	7.3	6.0	2.2	10.1
$10 000 and over	4.6	3.0	1.9	8.7
Mean Cost	$2 283	$1 987	$1 456	$3 396
Median Cost	$1 150	$ 998	$ 600	$1 600
Standard Error of the Mean	$143	$118	$169	$185
n	703	668	281	955

SOURCE: National Housing Study, CMHC, 1986.

TABLE 2.11
COSTS OF REPAIRS REQUIRED TO BRING OWNER-OCCUPIED DWELLINGS UP TO STANDARD: BY NEED FOR REPAIR CATEGORY

NEED FOR REPAIRS	(n)	MEAN ($)	MEDIAN ($)	STANDARD ERROR OF MEAN ($)
BUILDING EXPERTS				
Major Repairs	352	7 823	5 138	440
Minor Repairs	367	1 616	1 000	101
Maintenance Only	235	1 151	600	142
OCCUPANTS				
Major Repairs	185	6 989	3 700	677
Minor Repairs	251	3 640	2 075	330
Maintenance Only	470	1 818	900	143

SOURCE: National Housing Study, CMHC, 1986.

occupants' assessments of dwelling condition and to quantify the impacts of occupant characteristics on their ability to rate building condition, the National Housing Study employed trained building experts to assess a sample of the respondent units.

The analytical approach was to measure and account for any differences between the owner/occupant assessments and those provided by the building experts. It was assumed that the experts provided an objective benchmark against which to judge the ratings of the owner/occupants. A comparison of the assessments provided for the same dwellings by the two groups is presented in Table 2.12.

TABLE 2.12
COMPARISON OF OCCUPANTS' AND EXPERTS' ASSESSMENTS OF NEED FOR REPAIRS BY RESPONDENT TYPE

RESPONDENT	CASES WHERE OCCUPANT RATING MATCHED EXPERT RATING				DIRECTION OF BIAS(1)		(n)
	CORRECT OVERALL (%)	MAJOR REPAIR (%)	MINOR REPAIR (%)	REGULAR MAINTENANCE (%)	UNDER-ESTIMATE (%)	OVER-ESTIMATE (%)	
Homeowners	58.8	36.4	28.7	79.5	25.8	15.5	1 658
Landlords	49.0	14.5	21.7	70.2	29.2	22.8	139

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Occupant rating compared to expert rating.

Approximately three out of every five homeowners included in the matched subsample were able to correctly assign their dwelling to the need for repair category provided by the building expert. Landlords were somewhat less successful, with just under half providing correct assessments.

As a general rule, it appears that the poorer the condition of the dwelling (as determined by the building expert), the greater the discrepancy with the occupants' and landlords' assessments. The majority of homeowners and landlords correctly identified dwellings in need of regular maintenance only (as determined by the building experts). This was not the case for dwellings in need of major repair. Only 36.4 per cent of homeowners and 14.5 per cent of landlords were able to recognize when the dwelling they own or occupy was in need of major repairs. This is an important finding, as it suggests that estimates of repair need which are based on owners' assessments of dwelling condition may underestimate the need for major repairs.

Information on the direction of "classification" errors is also contained in Table 2.12. An examination of the directional bias among such errors reveals that the survey respondents illustrated a marked tendency to underestimate the need for repairs. This trend is less pronounced for landlords than for homeowners.

More detailed information pertaining to the accuracy of homeowners' assessments of the need for repairs is contained in Table 2.13. The small sample size of rental inspections precluded a similar analysis of rental dwellings. The data illustrate that the accuracy of homeowners' assessments of dwelling condition varies considerably between different regions, dwelling ages, household income groups, length of occupancy, and levels of educational achievement.

Several building and occupant characteristics appear to be related to the proportion of matched homeowner and building expert assessments of need for repairs. Across regions, cases in Ontario had a greater proportion of matches. When controlling for period of construction, dwellings built before 1941 had 46 per cent matches while newer dwellings (after 1961) had almost two-thirds matches. On occupant characteristics, a relationship between household income and matched cases is evident, where the proportion of matched cases increased as income increased. In addition, fewer matches occurred where the respondents were less educated.

An analysis was also undertaken of the extent of agreement between homeowners and building expert assessments using the individual dwelling component ratings as measured on a seven-point interval scale.

TABLE 2.13
COMPARISON OF OCCUPANTS' AND EXPERTS' ASSESSMENTS OF NEED FOR REPAIRS - HOMEOWNER DWELLINGS(1)

HOUSEHOLD DWELLING CHARACTERISTICS	OCCUPANT AGREES	OCCUPANT UNDER-ESTIMATES (%)	OCCUPANT OVER-ESTIMATES (%)	NUMBER OF CASES (n)
ALL HOMEOWNERS	58.8	25.8	15.5	1 657
REGION				
Atlantic	50.3	37.1	12.6	447
Quebec	59.3	26.4	14.3	371
Ontario	62.6	22.3	15.2	211
Prairies	57.7	25.3	17.0	413
British Columbia	54.4	27.0	18.6	215
SETTLEMENT SIZE				
Urban	61.0	23.5	15.6	955
Rural	55.0	32.0	13.1	583
PERIOD OF CONSTRUCTION				
Prior to 1941	46.6	32.9	20.5	334
1941-1960	56.9	24.8	18.4	372
1961-1986	63.2	24.1	12.7	951
LENGTH OF OCCUPANCY				
Less than 5 years	56.9	25.6	17.5	575
5-10 years	60.0	24.4	15.6	391
Over 10 years	59.6	26.8	13.5	688
HOUSEHOLD INCOME				
Less than $20 000	47.7	34.5	17.8	412
$20 000-$29 999	59.6	24.3	16.1	284
$30 000-$39 999	59.2	24.2	16.6	332
$40 000-$49 999	56.1	29.1	14.8	273
$50 000 or more	68.7	18.5	12.8	356
EDUCATIONAL ACHIEVEMENT				
Primary School	50.2	34.6	15.3	169
High School	58.9	27.2	14.0	626
College	61.4	22.4	16.2	311
University	59.8	23.3	16.9	472

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Analysis based on responses to the "need for repairs" question.

In the first stage of the analysis, simple correlations were calculated for individual dwelling components. The results of the correlation analysis comparing homeowners' and experts' condition ratings revealed relationships which, while statistically significant, were not overly strong. Considerably weaker results were obtained for landlords and particularly for renters. The relatively small size of the rental sub-sample may be partially responsible for the lower numbers of statistically significant relationships being observed.

Generally speaking, the absence of strong relationships between the individual dwelling condition ratings provided by building experts and those provided by property owners/occupants confirms the observations made earlier with respect to differences in perceived repair requirements.

Another means of comparing the condition ratings assigned by the two methods is simply to calculate the mean difference of the scores provided by the two groups. This analysis has been undertaken for homeowners only due to the lack of a statistically significant rental sub-sample. The results are contained in Table 2.14.

TABLE 2.14
COMPARISON OF OCCUPANTS' AND EXPERTS' CONDITION ASSESSMENTS OF DWELLING COMPONENTS - HOMEOWNER DWELLINGS(1)

HOUSEHOLD DWELLING CHARACTERISTICS	MEAN EXPERT SCORE	MEAN HOMEOWNER SCORE	MEAN DIFFERENCE (2)	NUMBER OF CASES
ALL HOMEOWNERS				
REGION				
Atlantic	70.7	80.3	-10.1	109
Quebec	77.4	84.7	-7.8	58
Ontario	82.3	82.1	-1.9	93
Prairies	69.3	81.1	-10.6	149
British Columbia	78.5	81.1	-2.3	80
SETTLEMENT SIZE				
Urban	76.5	83.0	-6.7	305
Rural	71.1	80.1	-7.5	148
PERIOD OF CONSTRUCTION				
Prior to 1941	69.1	74.8	-6.9	103
1941-1960	71.6	79.4	-9.1	114
1961-1986	78.5	84.8	-5.9	257
LENGTH OF OCCUPANCY				
Less than 5 years	76.5	81.0	-3.0	156
5-10 years	75.3	83.1	-7.6	130
Over 10 years	72.5	81.7	-10.0	200
HOUSEHOLD INCOME				
Less than $20,000	71.2	76.7	-8.3	66
$20 000-$29 999	73.5	80.8	-7.3	61
$30 000-$39 999	74.7	83.8	-7.3	63
$40 000-$49 999	77.4	82.8	-4.0	56
$50 000 or more	78.1	85.6	-6.7	135
EDUCATIONAL ACHIEVEMENT				
Primary School	67.4	79.0	-12.7	41
High School	74.4	81.4	-6.6	183
College	74.5	81.9	-6.0	83
University	76.6	82.6	-6.3	119

SOURCE: National Housing Study, CMHC, 1986.

NOTES:
1. Analysis based on the standardized sum of the individual dwelling component ratings.
2. Average of the difference between the standardized occupant and expert ratings for each matched case

In order to deal with the lack of perfectly corresponding variable definitions for the expert and homeowner condition ratings, summary ratings were calculated for exteriors, interiors, mechanical systems and overall dwelling conditions. The summary ratings were calculated as additive indices in which each component was assigned an equal weight. For ease of illustration, the resultant condition ratings have been converted from the original 7 point scale to one in which values range from 0 to 100 (with 100 indicating perfect condition). It is the mean of the differences between these summary ratings which are compared in Table 2.14.

The results of this analysis can be summarized as follows. On average, using summary ratings, homeowner occupants rated their dwellings as being in better condition than did the building experts. This is more so the case for mechanical systems than for dwelling exteriors and interiors. The extent of this overestimation is most pronounced in Atlantic Canada and the Prairie provinces and for the following occupant/dwelling characteristics:

- buildings built between 1941-1960
- homeowners living in the dwelling over 10 years
- homeowners with primary school education only

Further analysis of regional differences has revealed that, after controlling for differences in dwelling age, size and selling price, need for repairs, and household income, the regional variable still accounted for more than 50 per cent of the variation in the difference scores. This suggests that there may be regional differences in perceptions and attitudes to the acceptability of dwelling conditions which are not solely related to readily quantifiable socio-economic factors.

To the extent that property owner perceptions of dwelling conditions influence investments in maintenance and repairs, the tendency to underestimate repair requirements may represent a serious obstacle to the conservation of the existing stock.

C. SUMMARY

Renovation encompasses a wide variety of actions to existing buildings which are undertaken for different reasons and with different effects. Some activities are directed at maintaining satisfactory dwelling condition through the maintenance, repair or replacement of substandard or non-functioning elements. Alternately, the quality of the building can be improved through the upgrading of components, the provision of additional space and facilities or the conversion of existing space to alternate use.

Expenditures on renovation have increased over the past decade to equal or exceed those for new construction in the last two years. Nationally, an estimated 13 billion dollars was spent on residential renovation in 1986. The fastest growing components of renovation expenditures are improvements and additions which represent almost three-quarters of the total amount. An important renovation component which is not captured within the national expenditure estimates is the "do-it-yourself" work undertaken by property owners. Various studies suggest that owner supplied labour and/or materials may amount to several billion dollars of additional expenditures.

Renovation is undertaken by property owners for many reasons. On a purely economic basis, renovation will be preferred to moving when the benefits of renovation (market value increases, increased revenue, decreased operating costs, etc.) exceed the costs of the work (materials, labour, fees, etc.) or the costs of selling and moving to another dwelling (capital costs, transaction costs, etc.). Many non-economic factors also influence the property owner's decision to renovate including health and safety considerations and individual preferences and tastes.

Estimates of repair requirements of the existing housing stock were examined. Only the need for repair, that is, maintenance, repair and replacement work, was considered. Renovation which may be desired by the owner on a discretionary basis but which is not directly related to ensuring minimum quality housing was not included. Several measures of repair need were examined and new data for the low rise housing stock were presented. These data were derived from occupant and building expert assessments of dwelling condition obtained through the National Housing Study.

The vast majority of dwellings are in need of regular maintenance only. However, depending on the estimate used, between one quarter and one third of all dwellings are in need of some repairs. The National Housing Study estimates reveal that one in ten dwellings were in need of major repairs in 1986. Rental dwellings were in slightly worse condition than owner occupied dwellings. The incidence of dwellings in need of repair was highest in the Atlantic region, in rural areas and for pre-war housing.

The National Housing Study also includes repair cost estimates provided by trained building experts for a sample of homeowner occupied dwellings. The average cost of required repairs was $3 396 per dwelling with half of the costs estimated at less than $1 600 per dwelling. Required repair costs were higher in

rural areas ($4 992 average, $2 100 median) and increased as dwelling age increased. Dwellings rated by building experts to be in need of major repairs had correspondingly higher repair costs ($7 823 Major, $1 616 Minor, $1 151 Regular maintenance).

Finally, the National Housing Study provides data which permits an examination of the ability of occupants and owners to assess the physical condition of their dwellings. This is done by comparing assessments provided for the same dwellings by owners and occupants to those provided by building experts. Three out of five homeowners and half of landlords were able to correctly assess the need for repair category of their dwelling (as determined by the building expert). However, for dwellings in need of major repair, only 36 per cent of homeowners and 15 per cent of landlords correctly assessed their dwelling's condition. Moreover, an examination of the direction of classification errors indicates a marked tendency among homeowners to underestimate the need for repairs in general.

CHAPTER III
THE RESIDENTIAL RENOVATION MARKET

As previously discussed, renovation spending has increased significantly in recent years. One can question, however, the extent to which these expenditures have been effective in adequately maintaining and upgrading the existing housing stock, given the large outstanding number of physically substandard dwellings.

This chapter examines renovation activity in its market context to provide more detailed information on the manner in which renovation is carried out. The structure and operation of the market is described by examining the activities of the major participants: consumers who do this work for themselves on their own property or who contract to firms or hire labour; firms involved in renovation as a business; and the three levels of government through their regulatory role.

The consumer side of the market is described by examining the expenditure patterns and characteristics of renovators. On the industry side, an outline of the salient characteristics and operating concerns of firms is provided based upon data collected for this study through a national survey of renovation firms. The involvement of government is described by noting the points where the public sector has intervened in the renovation process, and the associated impacts on the planning and undertaking of this work.

A. RENOVATION CONSUMERS

1. Owner Renovation Spending

The National Housing Study collected detailed information from property owners in the low rise housing stock on the nature and extent of renovation activity undertaken in 1985. Information included the type of work done, amount spent and the use of renovation contractors. The study provides the most up-to-date national source of data on residential renovation. In addition, the study enables estimates to be derived at the national and regional levels, by tenure and by a number of other selected characteristics.

Nationally, half of the homeowner respondents and almost two thirds of the landlord respondents indicated that they had undertaken some renovation activities in 1985. Homeowners spent $3 380 on average while landlord expenditures, per unit, were lower at $1 815. Over half of all expenditures were less than

$1 600. Tables 3.1 and 3.2 provide additional information on homeowner and landlord renovators and renovation expenditures.

There were no major regional or urban/rural differences in the incidence of renovation work or the average amount spent by homeowners. Three quarters of all work took place in urban areas reflecting the urban influence of Ontario and, to a lesser extent, Quebec. Landlords were much more likely to have renovated in the Prairies (67%) and less likely in the Atlantic (51%). However, the amount spent per unit was lower in the Prairies ($1 609) and British Columbia ($864) and highest in Quebec ($2 249).

Homeowner households with higher incomes were most likely to renovate and spent considerably more than their lower income counterparts. Both homeowners and landlords who rated their property in need of minor repairs were more likely to have renovated than those currently rating properties in better or worse condition.

Table 3.3 presents a summary of the type of work undertaken by purpose of the work (maintenance, repairs, improvements) and dwelling component (exterior, interior, mechanical systems). More detailed tables showing work by individual dwelling component are contained in Appendix C. Overall, homeowners did more work of an improvement nature while landlords did more maintenance work. Not surprisingly, tenants did much less work of any kind, doing primarily interior maintenance and improvements.

This pattern can be partially explained by the different reasons which govern homeowner and landlord decisions to renovate, as discussed in Chapter II. Homeowners, acting from a consumption motive, will often improve their dwelling to meet their changing preferences and requirements for accommodation. For landlords, the investment motive is more important as they undertake work to maintain the economic viability (reduce operating expenses) and marketability (painting/repairs at change of tenant) of the property. This is evident from the data in Table 3.3 which show that homeowners do very little maintenance on mechanical systems or interior repairs. Landlords, on the other hand, do considerably more maintenance to all components.

The spending pattern of renovator homeowners is clearly discernable when examining four factors associated with this activity: the physical repair requirements of the dwelling, the financial capability and motives of the property owner for undertaking work, and the past renovator behavior of the owner.

TABLE 3.1
INCIDENCE AND DISTRIBUTION BY SELECTED CHARACTERISTICS
1985 RENOVATORS

CHARACTERISTICS	INCIDENCE (%)	DISTRIBUTION (%)	NUMBER OF CASES
HOMEOWNERS			
ALL HOMEOWNERS	50.0	100	4 285
REGION			
Atlantic	47.0	9.1	1 024
Quebec	46.9	20.3	696
Ontario	54.3	38.6	749
Prairie	52.2	19.5	1 102
BC	50.3	12.5	714
SETTLEMENT SIZE			
Urban	52.8	74.0	2 665
Rural	47.6	26.0	1 329
ANNUAL HOUSEHOLD INCOME			
Less than $20,000	39.6	15.9	717
$20,000 - $40,000	52.4	43.2	1 773
More than $40,000	57.1	40.9	1 468
AGE OF RESPONDENT			
Less than 40 years	56.1	46.7	1 963
40 - 60 years	50.2	39.3	1 590
More than 60 years	40.5	14.0	609
FAMILY TYPE			
Couple with children	54.6	65.5	2 745
Couple without children	47.1	21.4	869
Other	43.8	13.1	562
DWELLING CONDITION			
Major Repairs	49.2	8.1	363
Minor Repairs	57.7	24.2	998
Regular Maintenance	49.8	67.7	2 816
LENGTH OF OCCUPANCY			
Less than 5 years	54.3	36.2	1 491
5 - 10 years	53.8	24.2	1 044
More than 10 years	47.4	39.6	1 697
LANDLORDS			
ALL LANDLORDS	60.8	100	544
REGION			
Atlantic	51.2	5.5	98
Quebec	59.7	34.5	169
Ontario	61.5	20.1	91
Prairies	66.7	28.1	118
BC	58.6	11.8	68
NUMBER OF UNITS			
1	57.3	21.3	114
2 - 4	63.4	39.8	204
5 - 10	65.2	14.0	73
More than 10	62.6	24.9	134
DWELLING CONDITION			
Major Repairs	61.8	11.9	58
Minor Repairs	70.9	27.4	148
Regular Maintenance	56.9	60.7	323
LANDLORD TYPE			
One Individual	59.8	52.6	92
More than one Individual	69.5	27.4	284
Corporation	56.0	15.5	134
Other	50.0	4.1	22

SOURCE: National Housing Study, CMHC, 1986.

TABLE 3.2
RENOVATION EXPENDITURES (MEAN AND MEDIAN)
BY SELECTED CHARACTERISTICS
1985 RENOVATORS

CHARACTERISTICS	MEAN ($)	MEDIAN ($)	NUMBER OF CASES
HOMEOWNERS			
ALL HOMEOWNERS RENOVATORS	3 380	1 600	3 544
REGION			
Atlantic	3 270	1 550	823
Quebec	3 628	2 000	599
Ontario	3 412	1 950	616
Prairie	3 114	1 500	904
BC	3 357	1 500	602
SETTLEMENT SIZE			
Urban	3 305	1 655	2 232
Rural	3 521	1 500	1 067
ANNUAL HOUSEHOLD INCOME			
Less than $20,000	3 216	1 350	565
$20,000 - $40,000	2 813	1 500	1 506
More than $40,000	4 054	2 000	1 254
AGE OF RESPONDENT			
Less than 40 years	3 303	1 650	1 693
40 - 60 years	3 487	1 700	1 334
More than 60 years	3 214	1 483	442
FAMILY TYPE			
Couple with children	3 381	1 600	2 307
Couple without children	3 464	1 900	707
Other	3 186	1 500	454
DWELLING CONDITION			
Major Repairs	3 211	1 700	311
Minor Repairs	3 019	1 615	864
Regular Maintenance	3 510	1 600	2 295
LENGTH OF OCCUPANCY			
Less than 5 years	3 698	1 800	1 272
5 - 10 years	2 786	1 500	876
More than 10 years	3 413	1 650	1 359
LANDLORDS	**MEAN ($/UNIT)**	**MEDIAN ($/UNIT)**	**NUMBER OF CASES**
ALL LANDLORDS	1 815	1 673	424
REGION			
Atlantic	1 130	572	80
Quebec	2 249	791	150
Ontario	1 827	968	63
Prairies	1 609	479	86
BC	864	486	45
NUMBER OF UNITS			
1	1 855	1 000	94
2 - 4	2 162	1 000	170
5 - 10	2 795	540	63
More than 10	526	326	97
DWELLING CONDITION			
Major Repairs	2 534	902	46
Minor Repairs	1 639	765	112
Regular Maintenance	1 716	582	256
LANDLORD TYPE			
One Individual	2 062	7 506	235
More than one Individual	1 437	760	101
Corporation	1 275	426	72
Other	2 861	365	12

SOURCE: National Housing Study, CMHC, 1986.

TABLE 3.3
INCIDENCE OF RENOVATION ACTIVITY
BY TENURE AND TYPE OF WORK

DWELLING COMPONENT	MAINTENANCE (%)	REPAIRS (%)	IMPROVEMENTS (%)	ANY WORK (%)	(n)
HOMEOWNERS					
Exterior	20.2	19.1	21.9	42.4	3 680
Interior	14.7	9.5	24.0	38.0	3 244
Mechanical Systems	8.7	13.8	19.5	32.7	2 809
ALL COMPONENTS	27.2	27.1	36.3	51.0	4 420
LANDLORDS					
Exterior	30.5	24.5	18.6	52.2	482
Interior	29.3	17.9	19.3	48.7	445
Mechanical Systems	20.9	22.8	17.0	46.4	430
ALL COMPONENTS	42.6	36.8	33.6	60.7	571
TENANTS					
Exterior	N/A	N/A	N/A	N/A	N/A
Interior	10.6	7.7	13.4	22.8	520
Mechanical Systems	5.1	8.2	6.0	14.3	338
ALL COMPONENTS	12.2	12.7	15.1	24.0	565

SOURCE: National Housing Study, CMHC, 1986.

Homeowners of dwellings in need of either major or minor repair report spending less than those indicating their property is only in need of on-going maintenance, as shown in Table 3.4. This may be explained by the fact that renovation expenditures are reported for 1985, while dwelling condition is as of 1986, showing that some improvement in physical condition may have occurred as a result of homeowner renovation activity.

TABLE 3.4
DISTRIBUTION OF RENOVATION EXPENDITURES (1985)
BY DWELLING CONDITION (1986)

EXPENDITURE CATEGORY ($)	DWELLING CONDITION (OWNER/OCCUPANT RATING) MAJOR REPAIR (%)	MINOR REPAIR (%)	REGULAR MAINTENANCE (%)
HOMEOWNERS			
Less than 1 000	35.6	32.4	29.9
1 000-1 999	13.9	21.3	22.7
2 000-2 999	12.8	15.5	14.6
3 000-4 999	15.3	15.2	14.7
5 000-9 999	15.5	10.3	11.5
10 000 and more	6.8	5.3	6.6
AVERAGE	$3 211	$3 019	$3 510
n=	291	826	2 169

EXPENDITURE CATEGORY ($ PER UNIT)	DWELLING CONDITION (OWNER RATING) MAJOR REPAIR %	MINOR REPAIR %	MAINTENANCE ONLY %
LANDLORDS			
Less than 1 000	56.8	53.8	62.5
1 000-1 999	20.5	24.5	15.5
2 000-2 999	4.5	9.4	6.0
3 000-4 999	13.6	5.7	8.8
5 000-9 999	2.3	4.7	6.4
More Than 10 000	2.3	1.9	0.8
AVERAGE	$1 955	$1 698	$1 648
n=	45	100	39

SOURCE: National Housing Study, CMHC, 1986.

Nevertheless, this result is somewhat surprising in that the average amount spent does not vary significantly according to dwelling condition ratings. However, it may be due to larger expenditures for improvements and additions by those in dwellings in need of maintenance only. Regardless of the condition of the dwelling currently, a large proportion of homeowner renovators report spending under $1 000 on renovation work.

When compared to the repair cost estimates, these amounts are too low to carry out all needed major or minor repairs at one time. As reported in Chapter II, dwellings judged by homeowners to be in need of major repair require almost $7 000 in renovation to bring them up to minimum standard. Dwellings in

need of only minor repairs required $3 640 in expenditures. However, property owners may choose to prioritize needed repairs and schedule the work over several years. Only the regular maintenance requirements ($1 818) could be satisfied by the level of expenditures found for 1985.

Expenditure levels of landlords are generally lower than for homeowners overall, and by building need for repair as shown in Table 3.4. Close to $2 000 is spent per unit on buildings in need of major repair. The distribution of expenditure amounts by repair need category shows also that a much larger proportion of landlords of buildings in need of major repair spent less than $1000 on renovation in 1985, compared to homeowners.

The level of homeowner renovation expenditures is more significantly related to financial capability, as measured by household income. As illustrated in Table 3.5, the proportion of homeowners renovating in higher expenditure categories was much greater for the high income earners than for moderate income earners, when compared to the overall distribution of homeowners by expenditure category. Almost one-third of moderate income homeowners spent under $1 000 renovating, compared to over 25 per cent of high income homeowners who spent more than $5 000 in 1985. The average expenditure for high income households ($3 352) was higher than that for low income households ($2 960).

TABLE 3.5
DISTRIBUTION OF RENOVATION EXPENDITURES BY INCOME CLASS: 1985 HOMEOWNER RENOVATORS

EXPENDITURE CATEGORY ($)	ALL (%)	LOW INCOME HOUSEHOLDS (LESS THAN $25 000) (%)	MODERATE INCOME HOUSEHOLDS (25 000 - 50 000) (%)	HIGH INCOME HOUSEHOLDS (MORE THAN $50,000) (%)
Less than $1 000	30.4	39.4	31.7	22.6
1 000-1 999	21.5	18.4	24.5	18.9
2 000-2 999	15.1	12.2	14.7	17.4
3 000-4 999	14.9	12.3	15.5	15.6
5 000-9 999	11.9	11.0	9.4	16.4
10 000 and more	6.2	6.7	4.2	9.0
AVERAGE	$2 989	$2 960	$2 793	$3 352
n=	2 859	659	1 457	843

SOURCE: National Housing Study, CMHC, 1986.

When comparing average expenditure levels by size of rental building, it is apparent that landlords spent less per unit renovating properties with more than six units, although more was spent as size increased up to six units. As Table 3.6 shows, the pattern of spending for buildings with 2 units or less, is even more clustered at lower expenditure levels compared to the distribution of homeowner spending by expenditure category.

TABLE 3.6
DISTRIBUTION OF RENOVATION EXPENDITURES PER UNIT BY NUMBER OF UNITS: 1985 LANDLORD RENOVATORS

EXPENDITURE CATEGORY ($/UNIT)	ALL (%)	NUMBER OF UNITS 1-2 (%)	3-4 (%)	5-6 (%)	MORE THAN 6 (%)
Less than 1 000	58.5	38.6	58.8	72.2	86.1
1 000 - 1 999	18.9	26.0	13.6	15.4	12.0
2 000 - 2 999	6.9	11.0	8.8	1.0	1.0
3 000 - 4 999	8.3	14.0	7.2	4.5	1.0
5 000 - 9 999	5.6	9.2	8.1	0.0	0.0
10 000 and more	1.8	1.2	3.6	6.9	0.0
AVERAGE	$1 720	$2 041	$2 228	$2 854	$562
n=	393	178	66	34	115

SOURCE: National Housing Study, CMHC 1986.

The motives for undertaking renovation work are a third distinguishing factor in determining the level of renovation expenditure. Spending on work to enlarge a dwelling, either by adding rooms or making existing rooms larger, results in higher expenditures, although it is not a common activity. In Table 3.7 a summary is given of the average amounts spent for various reasons for renovating. It shows that work for additions produced a higher level of expenditure as did work done to meet minimum health and safety regulations. As with homeowner renovation spending, landlord expenditure on additions work is the highest.

Finally, whether owners renovated in 1985 has some bearing on the level of planned expenditures. Homeowners who renovated in 1985 plan to spend, on average in 1987, $3 047, about the same as homeowners who did not renovate in 1985 ($3 140). Overall, landlords plan to spend less per unit than homeowners. However, renovator landlords plan to spend, on average, $2 312 in 1987 compared to $1 845 for non-renovators.

TABLE 3.7
AVERAGE RENOVATION EXPENDITURES
BY REASON FOR RENOVATION

REASON FOR RENOVATING(1)	AVERAGE EXPENDITURE ($)	PROPORTION CITING (%)	(n)
HOMEOWNERS			
To look better inside	3 505	70.0	2 085
To look better outside	3 454	64.6	1 905
To make dwelling safer	3 501	49.6	1 261
To make dwelling bigger	6 484	23.2	455
To meet health, safety rules	4 227	28.1	546
To reduce heating costs	4 017	56.1	1 453
To reduce maintenance costs	3 816	49.8	1 261
To increase access for disabled	3 953	5.8	105
To increase resale value	3 715	50.5	1 380
REASON FOR RENOVATING(1)	**AVERAGE EXPENDITURE ($ PER UNIT)**	**PROPORTION CITING (%)**	**(n)**
LANDLORDS			
To look better inside	2 019	56.9	215
To look better outside	1 980	57.5	209
To make dwelling safer	1 908	52.7	178
To make dwelling bigger	5 204	9.3	20
To meet health, safety rules	2 021	40.9	108
To reduce heating costs	2 129	46.4	143
To reduce maintenance costs	2 135	55.2	176
To increase access for disabled	1 547	5.8	12
To increase resale value	2 073	46.3	143

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Rated 5, 6 or 7 on 7-point scale from 1 - Very Unimportant to 7 - Very Important.

Table 3.8 presents 1987 planned renovation expenditures by 1986 dwelling condition ratings. It is evident that homeowners plan to spend more in 1987 on homes in need of major repair regardless of whether they renovated in 1985. Landlords who renovated in 1985 plan to spend much less on buildings in need of minor repair, and much more on buildings in need of maintenance only than their non-renovator counterparts. There is no difference in planned expenditure for buildings needing major repairs. This finding suggests that homeowner spending intentions are consistent with the physical repair requirements of their dwellings. However, these intentions are not always translated into future action. Also, it is not clear whether

these planned expenditures would be devoted to outstanding repair requirements as opposed to other improvement or maintenance activities. Landlords, on the other hand, plan to do more maintenance activities, reducing the likelihood of minor repair requirements emerging later on.

TABLE 3.8
AVERAGE PLANNED 1987 RENOVATION EXPENDITURES BY (1986) DWELLING CONDITION: HOMEOWNERS AND LANDLORDS

CONDITION OF DWELLING (OWNER/OCCUPIED RATING)	AVERAGE PLANNED EXPENDITURE IN 1987					
	1985 RENOVATORS		1985 NON-RENOVATORS		ALL HOME-OWNERS	
	($)	(n)	($)	(n)	($)	(n)
HOMEOWNERS						
Major Repair	4 009	253	6 008	224	4 947	477
Minor Repair	3 215	744	3 382	466	3 279	1 210
On-going maintenance	2 844	1 741	2 843	1 310	2 943	3 051
All	3 047	2 752	3 140	2 051	3 171	4 833

CONDITION OF DWELLING (LANDLORD RATING)	AVERAGE PLANNED EXPENDITURE IN 1987					
	1985 RENOVATORS		1985 NON-RENOVATORS		ALL LANDLORDS	
	($/UNIT)	(n)	($/UNIT)	(n)	($/UNIT)	(n)
LANDLORDS						
Major Repair	2 799	41	2 914	25	2 842	66
Minor Repair	1 542	89	2 914	32	1 964	121
On-going maintenance	2 951	143	1 104	81	2 283	224
All	2 312	273	1 845	138	2 089	411

SOURCE: National Housing Study, CMHC, 1986.

A comparison of the household characteristics of homeowners undertaking renovation in 1985 to those who did not do renovation work that year shows that higher incomes and a relatively short occupancy are major factors contributing to this distinction in investment behavior. As shown in Table 3.9, when compared to non-renovators, homeowners who renovated in 1985 tended to be:

- younger;
- married with children;
- more highly educated, with higher average incomes; and
- employed to a greater extent in professional or managerial-type occupations.

TABLE 3.9
1985 RENOVATORS AND NON-RENOVATORS
BY SELECTED CHARACTERISTICS - HOMEOWNERS

CHARACTERISTICS	1985 RENOVATORS	1985 NON-RENOVATORS
	DISTRIBUTION (%)	DISTRIBUTION (%)
ALL HOMEOWNERS	50.0	50.0
AGE		
Under 40 years	49.6	40.8
41 to 60 years	36.4	37.9
Over 60 years	14.0	21.3
FAMILY TYPE		
Couple with children	65.5	57.1
Couple without children	21.4	25.2
Other	13.1	17.7
EDUCATION		
High School or less	47.8	59.0
More than High School	52.2	41.0
INCOME		
Under $20 000/year	16.3	26.6
$20 000-$40 000/year	41.4	40.1
Over $40 000/year	42.6	33.3
OCCUPATION		
Professional/Management	39.5	29.0
Sales/Service	14.0	16.3
Other	46.6	54.7
LENGTH OF OCCUPANCY		
0-5 years	36.3	32.0
5-10 years	24.2	21.9
10+ years	39.5	46.1
	INCIDENCE (%)	INCIDENCE (%)
WORK PLANS FOR 1987		
Exterior	61.3	43.2
Interior	50.6	34.1
Mechanical	31.3	19.7
Number of Cases	2 738	2 000

SOURCE: National Housing Study, CMHC, 1986.

2. Owner Labour Component

A significant share of the labour component involved in renovating is directly attributable to property owners. However, the proportion of property owners who renovate on a "do-it-yourself" basis, purchasing only materials, varies greatly depending on the type of job. Interior work, especially painting and wallpapering tops the list of jobs done without hiring labour or paying for professional assistance. Exterior roof work and mechanical types of jobs which may be less familiar to the owner, tend not to be undertaken on a "do-it-yourself" basis.

According to the results of the National Housing Study, more homeowners than landlords undertake work using their own labour. Owners indicated whether they: a) paid a firm or contractor who supplied the labour and materials; b) purchased the materials themselves; or c) hired the labour themselves. It was inferred that the owner used their own labour if neither a) nor c) were indicated.

Table 3.10 shows that about half of renovator homeowners surveyed provided their own labour for some renovations undertaken in 1985. About one third of renovator landlords reported doing their own work. This may be understated because some landlords may be delegating maintenance and repair work to building superintendents without hiring a contractor. Mechanical work is done less often by homeowners or landlords than more basic interior or exterior work.

TABLE 3.10
1985 RENOVATORS
PROVIDING OWN LABOUR
BY REGION

	ATLANTIC (%)	QUEBEC (%)	ONTARIO (%)	PRAIRIES (%)	B.C. (%)	CANADA (%)
HOMEOWNERS						
ANY WORK	69.5	72.9	62.6	68.5	67.8	67.2
Exterior	58.6	55.4	42.0	55.9	55.2	50.7
Interior	60.9	67.4	61.4	63.1	59.1	62.7
Mechanical	48.3	53.3	39.3	45.1	50.2	45.3
n=	773	553	573	800	545	3 244
LANDLORDS						
ANY WORK	45.7	56.7	55.1	58.7	61.4	48.2
Exterior	24.3	41.8	29.5	30.2	25.0	33.6
Interior	41.8	46.7	40.0	26.2	27.3	39.2
Mechanical	37.2	36.1	18.6	27.1	31.2	28.4
n=	78	142	79	88	58	445

SOURCE: National Housing Study, CMHC, 1986.

Regionally, for homeowners, the same pattern holds for most and least frequent type of work done by the owner (interior and mechanical respectively). The incidence of homeowner work is lowest in all categories in Ontario and highest in Quebec and the Atlantic. For landlords, the difference is less distinct, but landlords also tend to do the same types of work on their own. While there is no clear regional pattern, landlords in Quebec report the highest incidence of owner work in each of the three categories of work.

Table 3.11 shows the incidence of owner work by type of job. For homeowners, the most frequently undertaken jobs were painting (both exterior wood wall finishes and interior walls) and finish carpentry (walls, cabinets, shelves, doors). The least frequent were furnace repairs and roof/chimney work. For landlords the most frequent activities undertaken were fireplace work, steps and porches and exterior wood wall surfaces. The landlords were least likely to do the same types of work as homeowners (furnace repairs and roof/chimney work) and also repairs to floors.

TABLE 3.11
1985 RENOVATORS
PROVIDING OWN LABOUR
BY TYPE OF WORK

TYPE OF WORK	HOMEOWNERS (%)	HOMEOWNERS (n)	LANDLORDS (%)	LANDLORDS (n)
EXTERIOR				
Sitework	72.4	1 514	42.5	92
Walls				
structure	72.4	540	42.9	42
finish: wood	80.7	573	50.8	43
finish: other	55.3	288	38.4	20
Roof, Chimney				
gutters, downspouts	57.0	573	43.1	63
roof coverings	49.0	410	31.4	37
chimney	52.2	308	46.3	23
Doors, Windows	57.6	841	45.4	87
Steps, Porches	74.6	995	52.4	95
INTERIOR				
Carpentry				
floors	71.1	608	40.2	53
walls	79.1	967	48.5	76
cabinets, shelves	79.0	580	47.4	49
doors	79.2	610	38.2	51
Walls				
drywall/plaster	74.3	756	44.5	70
paint/paper	84.8	1839	42.2	140
Floors				
hardwood	64.8	201	33.9	17
carpet	52.5	582	31.9	60
tile	65.3	468	39.3	55
MECHANICAL SYSTEMS				
Electrical				
lighting fixtures	74.6	742	43.7	51
wiring	55.7	462	25.4	22
Heating/Cooling				
furnace	31.1	226	22.3	28
fireplace	67.4	257	64.2	9
ductwork	56.9	169	28.5	7
Plumbing				
pipes	62.5	452	35.3	51
fixtures	66.6	611	44.0	80
hot water heater	50.9	260	33.5	45
Insulation				
attic	50.4	279	44.1	21
wall	74.0	360	49.8	26
doors, windows	70.0	474	37.3	39

SOURCE: National Housing Study, CMHC, 1986.

B. THE RESIDENTIAL RENOVATION INDUSTRY

Although property owners are active participants in the renovation market, doing a significant share of the work on their own, the fact that overall spending on this activity has increased tremendously has attracted firms to what has become known as a growth industry. That increase has spawned several reviews of the structure and operation of the renovation sector. They have examined the industry at the municipal, provincial and national levels and generally report similar findings.

The CMHC Residential Renovation Industry Survey, conducted by the Program Evaluation Division in 1986, provides a unique opportunity to examine the structure and operation of the industry in all regions and in greater detail than previous studies. Because a list of all renovation firms in Canada is non-existent, a sample of firms was drawn from the renovation-related categories in every Yellow Page directory in the country. Since the sample may not represent all renovation firms, the results of the survey represent the practices and opinions of only those firms for which a completed questionnaire was obtained and cannot be generalized to all firms in the renovation industry. However, the survey represents the first attempt at surveying the national industry and the results can be used to provide information on the composition of the industry and aspects of firm behavior that have not previously been available. The survey is described in detail in Appendix A.

1. Industry Structure

This section describes the structure of the renovation industry by identifying the type of work done, and the size distribution and age profile of member firms. The renovation industry is highly diversified, consisting of two main groups each comprised of a number of different types of firms. First, there are those supplying labour or professional expertise, within which there are general and renovation contractors, the specialty subtrades, such as plumbers and carpenters, and new homebuilding contractors. Second, there are the material suppliers which include building material retailers and wholesalers.

There are thousands of firms in the renovation industry. Because a national inventory of renovation firms does not exist, the total number of firms exclusively doing renovation work is not known. Based on the listings in renovation-related categories in the Yellow Page directories, the total for Ontario and Quebec alone is placed at over 3 000 firms. When the

separate listings for the general contractors and individual subtrades categories are included, the total swells to over 40 000 firms in these two provinces alone.

The diversity of the industry is also apparent from the different degree of firms' involvement in renovation. The Residential Renovation Industry Survey reveals a sector comprised largely of firms for which renovation is a major, but not the only, component of their line of work. On average, the surveyed firms received 63.5 per cent of their sales from renovation work.

Nationally, two thirds of the firms surveyed derived more than half of their sales from residential renovation. As shown in Table 3.12, the incidence of such specialization in renovation was greatest in Ontario (74%), less in Quebec (58%) and was lowest in the Atlantic (44%). Specialization in renovation was also less evident in smaller market areas. This suggests that in smaller markets firms diversify and undertake a variety of types of work in order to generate enough revenue to stay in business. Nationally, the average proportion of sales from renovation for the renovation specialist firms was 81.5 per cent.

TABLE 3.12
1985 RESIDENTIAL RENOVATION FIRMS,
INCIDENCE AND DISTRIBUTION
BY SELECTED CHARACTERISTICS

	ALL FIRMS (ANY SALES FROM RENOVATION)		RENOVATION FIRMS (MORE THAN 50% OF SALES FROM RENOVATION)		
	DIST'N (%)	NUMBER (n)	INCIDENCE (%)	DIST'N (%)	NUMBER (n)
CANADA	100.0	1 004	66.0	100.0	663
REGION					
Atlantic	3.0	30	44.3	2.0	18
Quebec	22.4	221	58.4	19.6	129
Ontario	28.7	283	73.8	31.8	209
Prairies	25.9	255	68.2	26.4	174
British Columbia	19.9	196	67.9	20.2	133
MARKET AREA SIZE					
Less than 10 000	21.3	214	62.1	20.1	133
10 000 to 99 999	34.5	346	60.4	31.5	209
100 000 and more	44.2	444	72.3	48.4	321
YEARS IN RENOVATION					
Less than 5	25.7	250	71.6	27.6	179
5 to 10	41.5	403	64.3	40.0	259
More than 10	32.8	319	65.8	32.4	210
NUMBER OF EMPLOYEES (full or part time)					
2 or less	22.4	225	66.7	22.6	150
3 to 5	38.0	382	70.4	40.6	269
6 to 10	24.8	249	63.9	24.0	159
More than 10	14.7	148	57.4	12.8	85

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

Table 3.13 compares the type of work for firms specializing in renovation. Of the firms which specialized in renovation (i.e. more than 50 per cent of sales from residential renovation), the vast majority (78.6%) further specialized in repair and improvement work. In comparison 21.4 per cent of the firms derived the majority of their sales from additions and conversion work. No regional, market, firm size or age differences were evident in the incidence of specialization in repair/improvement work.

TABLE 3.13
1985 RENOVATION SPECIALIST FIRMS,
INCIDENCE AND DISTRIBUTION
BY SELECTED CHARACTERISTICS

	RENOVATION FIRMS (MORE THAN 50% OF SALES FROM RENOVATION)					
	REPAIRS/IMPROVEMENTS (MORE THAN 50% OF SALES FROM REPAIRS/ IMPROVEMENTS)			ADDITIONS/CONVERSIONS (MORE THAN 50% OF SALES FROM ADDITIONS/ CONVERSIONS)		
	INCIDENCE (%)	DIST'N (%)	(n)	INCIDENCE (%)	DIST'N (%)	(n)
CANADA	78.6	100	407	21.4	100	111
REGION						
Atlantic	81.8	2.2	9	18.2	1.8	2
Quebec	83.8	20.5	83	16.2	14.7	16
Ontario	77.8	32.1	130	22.2	33.9	37
Prairies	77.9	26.2	106	22.1	27.5	30
British Columbia	76.2	19.0	77	23.8	22.0	24
MARKET AREA SIZE						
Less than 10 000	80.0	18.7	76	20.0	17.1	19
10 000 to 99 999	80.1	32.7	133	19.9	29.7	33
100 000 and more	77.0	48.6	198	23.0	53.1	59
YEARS IN RENOVATION						
Less than 5	86.1	31.0	124	13.9	18.3	20
5 to 10	73.3	37.0	148	26.7	49.5	54
More than 10	78.5	32.0	128	21.5	32.1	35
NUMBER OF EMPLOYEES (full or part time)						
2 or less	85.2	25.5	104	14.7	16.2	18
3 to 5	75.7	39.1	159	24.3	45.9	51
6 to 10	73.9	20.9	85	26.1	27.0	30
More than 10	83.1	14.5	59	16.9	10.8	12

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

Table 3.14 compares several characteristics by type of firm. Renovation firms are smaller than non-specialist firms by virtue of having fewer full-time employees. There was no difference in age of firm. Obviously, renovation specialists have more employees doing renovation, than firms which do not specialize in renovation.

TABLE 3.14
COMPARISON OF SELECTED CHARACTERISTICS OF FIRMS

	ALL FIRMS				RENOVATION SPECIALISTS			
	RENOVATION SPECIALISTS(1)		NON-SPECIALISTS		REPAIR SPECIALISTS		ADDITION SPECIALISTS	
	MEAN	(n)	MEAN	(n)	MEAN	(n)	MEAN	(n)
NUMBER OF EMPLOYEES								
ALL	6.9	631	8.9	305	7.0	387	6.7	109
Full-time	5.3	607	7.4	297	5.4	373	5.7	102
Part-time	2.7	400	2.8	182	2.8	250	2.3	65
IN RENOVATION								
ALL	5.8	622	4.2	296	5.9	383	6.3	107
Full-time	4.7	597	3.6	280	4.8	367	5.3	101
Part-time	2.3	353	1.6	149	2.3	222	2.3	64
1985 SALES (%)								
Renovation	81.5	663	21.2	282	86.8	407	85.4	111
Repairs	67.2	651	42.4	300	83.2	407	26.1	103
Additions	37.1	558	40.1	252	20.2	314	75.6	111
AGE OF FIRM (YRS)								
In Renovation	10.2	649	11.0	325	10.1	400	10.8	109

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

NOTE: 1. Specialist firms derive more than half of their total sales from the area of specialization.

No differences were observed between renovation firms which specialize in repairs/improvements and those specializing in additions/conversions except for the obvious proportions of sales derived from each type of work. However, repair/improvement firms were more highly specialized, deriving a greater proportion of total sales from their specialty than addition/conversion firms (83.2% vs. 75%).

It is generally believed that the residential renovation industry is mainly composed of small, newly established firms. This stems in part from the low capitalization requirements and few regulatory requirements for firms entering the market. The transferability of skills and thus labour from new construction to renovation also allows firms to participate in both sectors.

Data from the Residential Renovation Industry Survey reveals that firms are larger and older than one might expect. The average size and age of firm are 5.3 full-time employees and 10.5 years. However, the distribution of firms is such that

over half are smaller and newer, 4 employees and 8 years respectively. As shown in Table 3.15, firms are larger and older in the eastern regions than in the western regions of the country.

TABLE 3.15
1985 RENOVATION SPECIALIST FIRMS
SIZE AND AGE BY REGION

	SIZE OF FIRM NUMBER OF EMPLOYEES MEAN	MEDIAN	AGE OF FIRM YEARS IN BUSINESS MEAN	MEDIAN	NUMBER OF FIRMS
CANADA	5.3	4.0	10.5	8.0	974
REGION					
Atlantic	7.5	5.0	11.2	8.0	29
Quebec	6.0	4.0	11.6	8.0	210
Ontario	5.5	4.0	11.8	10.0	275
Prairies	5.1	4.0	9.0	6.0	251
B.C.	4.2	3.0	9.4	6.0	194

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

2. Industry Operation

Several operational characteristics of renovation firms were examined to determine if variations in operating practices exist across regions, by type of renovation firm and by age and size of firm. Data are presented in Tables 3.16 and 3.17. Operating characteristics included the use of written contracts and guarantees, credit or loan financing, sources of information, methods of obtaining business and business planning.

Two thirds of the firms used written contracts and two fifths used written guarantees for the majority of their work. Little variation existed across regions with respect to the use of written contracts. For written guarantees, however, the incidence of use increased from a low of 33.3 per cent in the Atlantic Region to a high of 44.3 per cent in British Columbia. Nearly three quarters of firms reported some use of loan or credit financing. This was highest in the Atlantic and the Prairies and lowest in British Columbia. Renovation specialist firms were more likely to use written contracts and guarantees than firms which did not specialize in renovation. However, little difference was observed between the two types of firms in their use of financing.

TABLE 3.16
INDUSTRY OPERATION, USE OF WRITTEN CONTRACTS, GUARANTEES AND CREDIT BY SELECTED CHARACTERISTICS: 1985 RENOVATION FIRMS

	INCIDENCE OF OPERATING FEATURE					
	WRITTEN CONTRACTS(1)		WRITTEN GUARANTEES(2)		USE OF CREDIT/LOAN(3)	
	INCIDENCE (%)	(n)	INCIDENCE (%)	(n)	INCIDENCE (%)	(n)
CANADA	66.6	645	39.7	384	73.2	698
REGION						
Atlantic	66.7	20	33.3	10	79.3	23
Quebec	67.0	144	37.2	80	74.6	159
Ontario	67.3	187	38.1	106	70.8	192
Prairies	65.3	164	40.6	102	77.1	192
British Columbia	66.7	130	44.3	86	68.7	132
TYPE OF FIRM						
Non-Specialist	55.9	184	31.1	102	71.2	225
Specialist (more than 50% of sales)	71.5	469	43.9	288	74.2	483
AGE OF FIRM (Years in Renovation)						
Less than 5	70.6	173	49.4	121	76.0	181
5 to 10	69.0	276	42.0	167	75.8	298
More than 10	60.5	190	29.6	93	68.9	213
NUMBER OF EMPLOYEES (full or part time)						
2 or less	55.6	119	32.7	70	59.3	123
3 to 5	66.7	252	37.0	140	71.0	264
6 to 10	68.0	168	43.5	107	82.6	200
More than 10	78.1	114	50.0	73	83.4	121

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

NOTES:
1. Written contracts used for more than half of all renovation jobs.
2. Written guarantees provided for more than half of all renovation jobs.
3. Line of credit or loan used to finance operations.

TABLE 3.17
INDUSTRY OPERATION,
USAGE OF INFORMATION, METHODS OF OBTAINING BUSINESS
AND BUSINESS PLANNING:
1985 RENOVATION FIRMS

	FIRMS USING OPERATING FEATURE INCIDENCE (%)	(n)
INFORMATION SOURCES		
Material Suppliers	95.2	885
Word-of-Mouth	93.0	876
Clients	86.2	795
Trade Publications	79.4	745
Trade Shows	74.6	695
Government Publications	67.6	626
Demonstration Projects	60.3	553
Seminars/Conferences	52.8	488
Training Courses	46.9	431
OBTAINING BUSINESS(1)		
Word-of-Mouth	93.9	925
Yellow Pages	69.6	686
Site Signs	34.4	339
Tenders	33.1	326
Other	16.5	163
Purchase/Renovate	6.3	62
BUSINESS PLANNED/ACCEPTED(2)		
Up to 1 months advance	44.0	423
1-6 months advance	50.6	487
Over 6 months advance	3.5	34

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

NOTES:
1. This method for obtaining business used in 1985. More than one method could be reported.
2. How far in advance residential renovation projects were accepted on average in 1985.

The younger the firm, the more likely they are to use written contracts. Seventy-one per cent of firms in business less than 10 years used contracts more than half the time compared to only 60 per cent of firms in business for more than 15 years. The difference is even more pronounced for the use of written guarantees. Older firms also reported a less frequent use of loan or credit financing than younger firms.

Size of firm is also related to the use of written contracts, guarantees and loan or credit financing. Larger firms are more likely to use contracts, guarantees and loan financing for more than half their jobs. One and two person firms were much less likely to use written contracts, guarantees and loan or credit financing than larger firms.

Various sources were used by firms for information on the latest renovation products or technical ideas. Sources cited the most were material suppliers (95.2%) word-of-mouth (93.0%) and clients (86.2%). The least cited sources were training courses (46.9%) and seminars/conferences (52.8%). No significant variations in use were observed by region, although use of training courses and seminars was lowest in Ontario. The use of government sources was highest in the Atlantic. More formal sources were used more frequently by larger firms.

Firms obtained business and advertised in different ways. Relatively informal methods were used most frequently including word-of-mouth (used by 93.9%) and the yellow pages (69.6%)[1]. About one third cited tenders and site signs as methods which they used. There were some differences observed. Informal methods were less frequently used in Quebec and were used more frequently by mid-size firms. Tendering for work, usually a feature of larger jobs, was more frequent in the Atlantic and less used in Ontario and the Prairies. Also in the Atlantic, firms were more likely to purchase and renovate properties as a means of generating business. While there were no major variations by firm type or age, more formal methods (site signs and tenders) were cited more frequently by older firms.

All renovation firms surveyed reported a very short business planning horizon. Almost half of their work was accepted less than 1 month in advance of starting. Only 3.5 per cent of jobs were scheduled more than 6 months ahead. The planning horizon was slightly longer in Ontario and Quebec than in other regions and slightly longer for older firms.

C. GOVERNMENT INVOLVEMENT IN THE RENOVATION MARKET

The third major participant in the renovation market is government. In this section, the nature of government involvement is described by examining the objectives of renovation-related legislation and by commenting on the impacts of regulations on renovator behaviour.

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[1] It should be recalled that the sample of renovation firms was drawn from a listing of firms who advertised in the yellow pages. This particular result is therefore not surprising.

Government involvement in the renovation market is broad, encompassing both expenditure programs and the regulation of renovation activity. It is wide-ranging also in the sense that it pervades all aspects of the renovation process. There are regulations affecting planning and construction, building operation and the sale of renovated property. In the renovation market, there have been several major renovation programs instituted by the federal government in recent years[1]. Because they represent a special-purpose type of intervention, their impact on renovation is examined separately in Chapter V of this report.

The major types of measures affecting residential renovation include: taxation and tax relief, building codes, and building permit and approval procedures. A list of the major types of measures according to three aspects of property management is shown in Table 3.18. The following sections describe the nature and influence of these on the renovation decision.

TABLE 3.18
MAJOR FORMS OF GOVERNMENT INVOLVEMENT IN THE RENOVATION PROCESS

COMPONENTS OF THE RENOVATION PROCESS	TYPES OF MEASURES AFFECTING RENOVATORS
A. Property Development: Cost of Renovation	. zoning . sales tax . Maintenance and Occupancy bylaws, . building codes; . heritage designation . labour, occupational health and safety codes
B. Property Operation: Rate of Return on Investment	. property tax . capital cost allowance . rent review . income tax
C. Property Sale: Profitability of Investment	. capital gains tax . land transfer tax

SOURCE: Program Evaluation Division, CMHC, 1987.

[1] These include: the Residential Rehabilitation Assistance Program (RRAP), the Canada Home Renovation Plan (CHRP), the Home Improvement Loan Program (HIL), the Canadian Oil Substitution Program (COSP), the Canadian Home Insulation Program (CHIP) and NHA-insured second mortgage loans for renovation purposes.

1. Property Development

When deciding upon the best approach to meeting a shelter requirement, the property owner considers the costs of renovation compared to moving. Government affects the cost of renovation work through measures such as sales and property taxes, zoning and obligatory rules governing the physical standards for work.

a) Sales Tax

In order to stimulate new house construction, the federal government maintains an exemption on the retail sales tax for building materials. Because of the transferability of the use of these materials between the new and non-new construction sectors, the legislation also reduces the cost of renovation work. For most types of renovation jobs, where materials account for a smaller portion of the cost, the impact of the sales tax saving is less.

b) Maintenance and Occupancy Bylaws

Property Maintenance and Occupancy (M and O) bylaws legally authorize municipalities to inspect private property and impose fines or work orders to protect the health and safety of the occupants. In most provinces, municipalities employ M and O bylaws to regulate all aspects of the building's physical condition: structural, plumbing, electrical and fire safety[1].

The impact of Maintenance and Occupancy bylaw enforcement on the cost of renovating can be significant. Since the nature and timing of the required work may be established at the discretion of the municipality, the owner may have to undertake a larger amount of work for compliance at a time which is imposed rather than being at the owner's convenience.

c) Building Codes

Building codes set minimum physical standards for construction to ensure safety in dwelling design, methods, materials and occupancy. They are enforced by municipalities when a property owner applies for a permit to build, renovate or convert an existing house.

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[1] Legislation for M and O bylaws exists in all provinces, except British Columbia, outside Vancouver. A detailed commentary is contained in Hale, Robert L. Jr., The Provinces and Property Maintenance Bylaws, Residential Improvement Division, CMHC, 1986.

In most provinces, compliance with building codes merely requires following prescribed construction solutions. Although the prescriptive approach saves the designer and builder time, its inflexible nature often increases renovation costs. Renovating an older existing dwelling, built to an earlier, less stringent standard, may require alternate physical design or construction approaches.

Performance renovation codes, introduced in Ontario and in the cities of Vancouver, Winnipeg and Montreal, are more supportive of renovation since their requirements are stated in terms of the desired end result by allowing the acceptance of materials or methods which meet established safety standards.

Building code requirements tend to become redundant or out-of-date as construction technology evolves, because as new standards are added, few of the old ones are removed.

d) Other Property Use Bylaws

All provinces have legislation enacting dangerous or derelict building and/or unsightly premises bylaws. They apply to all properties and are invoked once a building has greatly deteriorated, either from owner neglect or due to serious fire.

The impact of these bylaws on the cost of renovation is potentially more significant than Maintenance and Occupancy bylaws. Their compliance provisions are usually more stringent, and they are usually broader in scope, governing conditions beyond the dwelling to include the site.

e) Building Permits

Municipal governments ensure building health and safety standards are met when property owners plan to construct or renovate by requiring them to file for a building permit. The cost of the work is affected in two ways. There is usually a fee charged which covers the review and approval process. And, if the proposed work does not conform to the building code, extra time and money may have to be spent revising the building plan or requesting approval for an adjustment or variance to allow the original workplan to be approved. In many municipalities the process of applying for and receiving a building permit can involve extensive time and may delay the start of renovation work. For these reasons, and through ignorance of the requirements on the part of do-it-yourself renovators, much renovation work occurs in the absence of a building permit.

Building permit application requirements differ across the country, but, generally there are exemptions in the form of

minimum thresholds allowed in several municipalities based on the scope or cost of the planned work. From a telephone survey of building permit officials in ten major centres, it was found that, in most, not all renovation work was subject to municipal approval. In several, as shown in Table 3.19, non-structural work and less costly projects are not usually reviewed.

TABLE 3.19
BUILDING PERMIT REQUIREMENTS
BY VALUE OF WORK
FOR SELECTED MUNICIPALITIES

MUNICIPALITY	MINIMUM VALUE OF RENOVATION WORK
1. St. John's, Nfld.	. all work requires permit, except painting from a ladder
2. Charlottetown, P.E.I.	. all structural alterations
3. Halifax, N.S.	. maintenance & repairs over $3 000 . all structural work
4. Saint John, N.B.	. maintenance or repairs over $10 000
5. Montreal, Que.	. all work, except maintenance
6. Toronto, Ont.	. all work covered under Ontario Building Code
7. Winnipeg, Man.	. all structural work . all work over $1 000 (excluding maintenance)
8. Saskatoon, Sask.	. all structural changes . all new construction and any change of use
9. Edmonton, Alta.	. all structural work and any non-structural work over $500
10. Vancouver, B.C.	. all renovations, except minor repair and maintenance

SOURCE: Public Regulation and Its Effects on Residential Renovation, Program Evaluation Division, CMHC, 1984 (updated July 1987).

f) Heritage Designation

Properties can be legally designated as being of heritage value by municipal bylaw or provincial Order-in-Council in order to protect their physical characteristics. This legal status may also be a prerequisite for assistance under certain renovation programs.

Protective measures include: the relaxation of zoning bylaws to permit non-conforming uses and the transfer of development rights of an owner to an alternate site. Incentives can include freezing of property taxes or the reduction of the property's assessed value.

The protection of heritage buildings does not promote renovation work directly. It is rather a socially-imposed incentive for owners to protect the intrinsic social significance of the structure.

Some programs administered by private groups represent direct incentives to renovate.

> "Several provinces have sponsored ... organizations operating at "arm's length" from ... government to offer compensation or incentives. Examples are the British Columbia Heritage Trust, the Ontario Heritage Foundation. Such organizations are involved in the limited use of revolving funds, easements and other incentives for ... (conserving) ... heritage property[1].

2. Property Operating Costs

It is important to recognize the impact of government on property operating costs for two reasons. First, operating expenses directly affect the property owner's ability to finance maintenance, which, in turn, impacts on the physical condition of the dwelling and ultimately, the health and safety of its occupants. Second, the magnitude of a building's operating expenses compared to the revenue it provides, especially for rental property, directly influences its attractiveness as an investment.

a) Property Taxation

Property taxes are payments made by property owners to municipalities. They are charged as a proportion of the

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[1] Heritage Conservation and Its Linkages with Residential Renovation, Program Evaluation Division, CMHC, 1985.

assessed market value of the property[1]. In addition to cyclical updating of assessed values, all provinces require the reassessment of renovated property. As shown in Table 3.20, the issuance of a building permit normally triggers an interim review, with some provinces moving toward a minimum value of work criterion. When renovation occurs, reassessment may be immediate, at the discretion of the municipal assessor or only undertaken for work costing above a minimum amount.

TABLE 3.20
PROPERTY ASSESSMENT PRACTICES
BY PROVINCE:
1987

PROVINCE	REASSESSMENT CYCLE	REASSESSMENT FOR RENOVATION
Newfoundland	. 6 years	. for work over $1 000 cost
P.E.I.	. 3 years(1)	. issuance of building permit
Nova Scotia	. 3 years	. issuance of building permit
New Brunswick	. 5 years	. issuance of building permit
Quebec	. 5 years	. at inspector's discretion
Ontario	. (2)	. for work over $5 000 cost
Manitoba(3)	. 5 years	. issuance of building permit
Saskatchewan	. 10 years	. at inspector's discretion
Alberta	. 7 years	. issuance of building permit
B.C.	. 6 years	. at inspector's discretion

SOURCE: Public Regulation and Its Effects on Residential Renovation, Program Evaluation Division, CMHC, 1984 (updated in June 1987).

NOTES:
1. Up to 5 years allowed
2. Ontario reassessments done at request of municipalities
3. Winnipeg assessment cycle is 3 years

[1] In Alberta and Saskatchewan, the assessed value is based on replacement cost.

Because property tax increases usually follow market value increases, low or fixed income property owners may disinvest or reduce maintenance expenditures in order to avoid the higher levy. On the rental side, landlords may also allow the building to deteriorate as a consequence of potential property tax increases.

In principle, the effect of the reassessment process should be neutral on the property owner's decision to renovate. If there are no biases in the procedure, that is, reassessments are not discretionary and are calculated consistently for different types of property, then the owner would undertake the work if the additional benefits justify the increase in tax.

b) Capital Cost Allowance

The Capital Cost Allowance (CCA) federal income tax provision allows rental property owners to deduct, as an operating expense, a five per cent annual depreciation of their property's construction cost. To the extent that the allowed depreciation exceeds the actual (or economic) depreciation of the property, the CCA is a tax expenditure program. The lower annual taxable income would increase the available budget for renovation expenses.

When renovating, the landlord can add the capital cost of the work to the remaining undepreciated construction cost of the property. Each year, a higher capital cost allowance can be claimed on the increased non-depreciated amount to the point where it equals the five per cent ceiling.

c) Rent Review

Rent review is provincial legislation which regulates the amount a landlord may charge for the occupancy of his rental property and the basis for and rate of allowable rent increases. As Table 3.21 shows, the level of government control over rent varies among provinces[1]. The least restrictive is a case-by-case review only upon application by the tenant or landlord. The most restrictive is legally enforced rent ceilings.

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[1] There is no rent review legislation in Alberta or British Columbia, New Brunswick, or the Yukon or Northwest Territories.

TABLE 3.21
TYPE OF RENT LEGISLATION
BY PROVINCE

TYPE	PROVINCE
Rent Review . quasi-judicial board . no ceilings or guidelines	Newfoundland, Quebec
Rent Review plus Guidelines . rent increase guidelines without legal basis	Saskatchewan
Rent Review plus Ceilings . legal ceiling on rent increases	Prince Edward Island, Nova Scotia, Ontario, Manitoba

SOURCE: Public Regulation and its Effects on Residential Renovation, Program Evaluation Division, CMHC, 1984 (updated July 1987).

The extent to which landlords are legally permitted to fully recover the cost of renovating through increased rents directly affects the likelihood of this work being undertaken. When the allowable rate of investment return does not cover this type of expense, landlords may reduce renovation expenditures and/or re-invest in alternate, more profitable ventures.

As a study done for the Ontario rent review inquiry reports, the maintenance disincentive may be somewhat alleviated with a cost-pass-through system. But, without knowing renovation expenditures prior to rent review and post-rent review introduction, it is difficult to assess the change in this activity which is attributable to the rent legislation[1].

3. Property Sale

The measures governing the sale of property directly impact on the profitability of renovation as an investment. At disposition, the owner seeks to earn a positive return, net of his renovation expense investment. The major types of government legislation affecting the profitability of renovation work, as calculated at the time of sale are: the capital gains tax, the capital cost allowance recapture provisions and the land transfer tax.

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[1] Commission of Inquiry into Residential Tenancies, The Costs of Rent Review in Ontario, Research Study No. 26, Toronto, January 1986.

a) Capital Gains Tax

A capital gain is the increase in property value realized upon sale of a property. For resident owners, no tax is levied on capital gains from the sale of their principal residence. Therefore, the gains in market value attributable to renovation are earned tax free. For owners of rental property, market value increases are earned tax free until the time of sale. The proceeds from the sale are subject to federal income tax. Capital gains are taxed at 50 per cent of the taxpayer's marginal tax rate.

b) Capital Cost Allowance Recapture

The tax deferral aspect of the Capital Cost Allowance provision impacts on the expense of operating a rental property, as discussed previously. However, deferred taxes are recaptured upon sale of the property and this affects the overall profitability of the investment.

When property sale proceeds exceed the remaining undepreciated capital cost, then a capital gain has been realised. The net financial benefit of the CCA deduction is then the difference between the rate of return on the deferred taxes and the additional tax payable.

Renovation, as a type of property investment, typically augments property values, resulting in a higher return on deferred taxes. The CCA then generally favours renovation.

c) Land Transfer Tax

The land transfer tax is a payment made by the purchaser on a percentage of the property's sale price. To the extent that it represents a significant amount, the prospective buyer may be induced to stay and renovate his current dwelling rather than purchase and move to another dwelling.

D. SUMMARY

There are three main groups of actors in the residential renovation market: property owners who choose to undertake renovations; firms which provide residential renovation services and government. This chapter has examined the role and behaviour of each of these groups.

The renovation activities and expenditures of property owners, both homeowners and landlords, were examined using information collected from them in 1986 through the National Housing Study. The study revealed that half of homeowners and three fifths of

landlords undertook some renovation work in 1985. Homeowners spent $3 380 on average while landlords spent $1 815 per unit. The majority of expenditures were much smaller; half were less than $1 600.

Analysis of renovation activities and expenditures revealed no regional differences for homeowners. Landlords were more likely to have renovated in the Prairies and less likely in the Atlantic. Expenditures were highest for landlords in Quebec. Homeowner households with higher incomes were most likely to renovate and spent considerably more than their lower income counterparts. Both homeowners and landlords who rated their property in need of only minor repairs were more likely to have renovated than those currently rating their property in better or worse condition. Overall, homeowners undertook more work of an improvement nature and landlords did more maintenance work. This can be explained, in part, by their different reasons for renovating. When compared to non-renovators, homeowners who renovated in 1985 were found to be younger, more likely to be married with children, were more highly educated and had higher incomes.

The renovation industry was examined using data collected through the Residential Renovation Industry Survey conducted by CMHC. Nationally, two thirds of the firms surveyed derived more than half of their sales from renovation work. The incidence of such specialization in renovation increased as market area size increased and was greatest in Ontario, less in Quebec and was lowest in the Atlantic region. This suggests that firms must do more than just renovation work in order to survive in small markets.

Nationally, on average, firms were found to be 10.5 years old and to have 5.3 full-time employees. Firms were larger and older in the Atlantic and smaller and newer in British Columbia.

Several operating characteristics of firms were examined including the use of written contracts, guarantees and credit/loan financing. Renovation specialist firms were more likely to utilize written contracts and provide written guarantees than non-specialist firms. This is a reflection of a highly competitive marketplace. However, there was little difference between the two types of firms in their use of financing.

Little regional variation existed with respect to the use of written contracts. For written guarantees, the incidence of use increased regionally from east to west. Younger firms and larger firms reported the use of contracts, guarantees and loan or credit financing to a greater extent than did older and smaller firms.

Firms reported the use of a number of different sources of information. The most frequently cited were material suppliers, word-of-mouth and clients. The least used were training courses and seminars/conferences.

Firms also reported on the methods used in 1985 to obtain business. By far the most frequently cited method was word-of-mouth, followed by yellow page advertising. More formal methods, such as site signs and tenders, were cited less frequently, and primarily by older, more established firms.

All levels of government are involved to some degree in renovation. Through their regulatory and taxation roles, they impact at several stages in the renovation process. They act to ensure that public health and safety considerations are taken into account in the development and physical renovation of properties. They also determine the disposition and taxation treatment of revenues and capital gains from the operation and sale of residential real estate. Direct expenditure programs of the federal government which support social or market efficiency objectives are discussed in Chapter V of this report.

Development controls affect the ease and cost of carrying out renovations and include zoning and other land use bylaws, building codes and occupational health, safety and labour codes. Property operation is affected by government regulations which impact on the rate of return on investment. Rental property revenues are subject to income tax provisions and, in many provinces, to rent control legislation. All properties are subject to property taxation and prevailing assessment practices. The profitability of the investment is affected at the time of sale by provisions of the Income Tax Act including the treatment of capital gains and the capital cost allowance.

CHAPTER IV
MARKET PROBLEMS

Despite remarkable growth in renovation expenditures, there remain outstanding repair requirements as evidenced by the large number of dwellings in need of major repair. At the same time, the renovation industry is evolving in terms of its operation, structure and organization. The purpose of this chapter is to identify problems in the renovation market that may explain the persistence of repair need and/or which may be containing the growth and development of the industry.

Potential problem areas on the demand side are examined first. The extent to which repair need is due to low income is addressed, followed by efficiency considerations such as the availability of financing and the existence of neighbourhood effects. Next, problem areas on the supply side are examined including the quality of renovation work, industry operations and the level of technical awareness within the industry.

A. PROBLEMS AFFECTING RENOVATION CONSUMERS

It has been observed that the magnitude of residential repair requirements has not declined despite considerable growth in renovation expenditures. To a certain extent, the relative stability of the proportion of dwellings in need of repairs masks the fact that the composition of this stock is constantly changing. At the same time as repair investments result in reductions of the substandard stock, the aging process continues to create additional repair requirements. However, the disproportionate representation of certain types of dwellings, property owners and occupants within the substandard stock may reflect the existence of legitimate market problems contributing to sub-optimal repair and maintenance behaviour.

The National Housing Study asked non-renovating owners for the factors which influenced their decision not to undertake any renovation work in 1985. As might be expected, the majority (54% of homeowners, 61% of landlords) indicated that no renovation work was needed in 1985 therefore none was undertaken (Table 4.1). For owners who did not indicate the lack of renovation requirements, two other reasons for not renovating were frequently cited. These were "renovation work would cost too much" and "other business was more important". It should be noted, however, that an equally large proportion cited "other" reasons for not renovating in 1985.

TABLE 4.1
REASONS FOR NOT UNDERTAKING RENOVATIONS IN 1985

REASON CITED	HOMEOWNERS			LANDLORDS		
	(n)	ALL(1) (%)	WHERE RENOVATION NEED RECOGNIZED(2) (%)	(n)	ALL(1) (%)	WHERE RENOVATION NEED RECOGNIZED(2) (%)
No renovation needed	1 999	53.9	--	191	60.9	--
Other business was more important	578	15.5	31.5	23	6.9	16.9
Renovation companies were too busy	36	1.1	2.0	1	0.4	1.0
Too much government red tape	54	1.3	2.6	6	2.5	5.4
Property taxes might increase	154	4.3	7.2	13	4.5	8.8
Renovation would cost too much	864	20.4	41.0	45	13.7	30.6
Interest rates too high	96	2.4	4.3	10	3.8	8.7
Loan terms unsuitable	32	0.7	1.3	6	3.2	6.0
Loan request turned down	30	0.7	1.6	2	0.6	1.7
Other	619	17.3	35.3	76	24.7	58.0

SOURCE: National Housing Study, CMHC, 1986.

NOTES: 1. Proportion of all non-renovating property owners.

2. Proportion of all non-renovating property owners who did not indicate that "No renovation work was needed".

In this section, the empirical evidence concerning a variety of potential market problems associated with the behavior of property owners and occupants who wish to undertake renovation work is examined. The first set of issues to be addressed are those related to equity concerns. Following this, problems stemming from market inefficiencies are examined.

1. Equity Considerations

Equity issues can be examined from two principal perspectives. Vertical equity concerns the extent to which households of different economic means are differentially affected by the need for repair and their ability to satisfy these needs. In contrast, horizontal equity refers to the differential impact of repair need and activities on households in similar economic circumstances.

Accordingly, section (a) examines the relationship between the need for repairs and the economic status of housing consumers and section (b) examines the influence of housing tenure on the renovation process and the impacts of renovation on renter households.

a) Need for Repairs and Economic Status

Non-renovating owners responding that renovation work would "cost too much" may be indicative of a number of different situations. An affordability problem would exist for those homeowners who require repairs but are unable to afford to do the work or to move to more adequate accommodation. A perceptual problem may occur for homeowners who require repairs to their dwelling but feel that the expenditure would not provide any return, either through increased market value or utility of the property. Finally, homeowners may be simply expressing a personal preference or desire to allocate their resources to something other than home renovation, even if this means continuing to live in a substandard dwelling.

To a certain extent, the persistence of repair requirements can be attributed to constraints posed by inadequate incomes. Table 4.2 displays the incidence of repair requirements among both owner occupied and rented dwellings according to the annual incomes of the occupants. For homeowners, the data demonstrate a direct relationship between the need for repairs and household incomes in both low rise dwellings and the housing stock at large. Homeowners with annual incomes under $30 000 were over-represented among dwellings in need of major repairs and under-represented among those requiring only regular maintenance.

TABLE 4.2
INCIDENCE OF REPAIR REQUIREMENTS BY TENURE AND GROSS HOUSEHOLD INCOME

GROSS HOUSEHOLD INCOME	MAJOR REPAIRS		MINOR REPAIRS		REGULAR MAINTENANCE	
	LOW RISE(1) (%)	TOTAL STOCK(2) (%)	LOW RISE (%)	TOTAL STOCK (%)	LOW RISE (%)	TOTAL STOCK (%)
HOMEOWNERS						
Under $10 000	11.3	20.6	21.4	15.1	67.2	64.3
$10 000-$19 999	14.2	17.4	23.4	13.5	62.4	69.3
$20 000-$29 999	10.1	13.9	23.7	13.3	66.2	73.6
$30 000-$39 999	7.3	12.6	20.5	11.3	72.3	76.6
$40 000 and over	5.4	10.2	20.3	11.1	74.3	79.4
All Homeowners	8.6	13.4	21.5	12.5	70.0	74.0
TENANTS						
Under $10 000	13.1	10.5	30.2	16.4	56.7	73.1
$10 000-$19 999	13.2	11.3	33.9	15.6	52.9	73.1
$20 000-$29 999	14.5	10.4	33.6	15.9	51.9	73.7
$30 000-$39 999	12.0	11.4	34.2	18.4	53.8	70.2
$40 000 and over	12.3	11.3	33.2	14.3	54.4	74.5
All Tenants	13.1	10.9	32.8	16.1	54.1	73.0

SOURCE: National Housing Study, CMHC, 1986 and Statistics Canada Microdata Tape 'HIFE 1985'.

NOTES: 1. Structures with under five stories. Data from National Housing Study.

2. Data from HIFE 1985 Microdata Files.

For tenants, the same relationship between income and the need for repairs is not apparent. This is largely a reflection of the fact that decisions concerning maintenance practices and renovation activity are made not by tenants, but by the owners of rental properties. Only a small proportion of tenants responding to the National Housing Study reported undertaking renovations themselves in 1985 (24.9%) or planning work for 1987 (31.6%). Most of this work was cosmetic only, activities such as painting and wallpapering. Furthermore, the propensity to undertake renovations does not vary according to income. The impact of tenant incomes on renovation activity in the rental sector is therefore somewhat indirect in nature, through their influence over the potential cash flow and prospects for cost recovery of landlords considering the renovation of their

properties. The impact of the tenure distinction has further ramifications for tenant households which are examined in the next section. The remainder of this discussion focuses on the influence of income constraints on the renovation behaviour of homeowners.

The impact of income constraints on the renovation activity of homeowners is illustrated in greater detail by the data contained in Table 4.3. This table compares estimates of the average costs of repair requirements identified by the building experts in 1986, the proportion of homeowners reporting renovation plans for 1987 and the average amount of planned expenditures.

The data reveal that, despite the higher average costs of repairs required by their dwellings, low income homeowners report both a lower incidence of renovation intentions and lower amounts of planned expenditures. The extent of the shortfall of renovation intentions among homeowners with annual incomes of less than $20 000 becomes all the more evident when the ratio of planned renovation expenditures to average repair requirements is examined.

Average renovation expenditures planned for 1987 by households earning less than $20 000 amount to only 48.6 per cent of the average repair requirements identified by the building experts in 1986. The ratio of planned expenditures to repair requirements was considerably higher for middle income homeowners (92.5%) and those earning over $40 000 (173.7%).

Clearly, income constraints exert a negative influence over the renovation intentions of low income homeowners. Insofar as households earning less than $20 000 per annum occupy a considerable proportion of the owner occupied housing stock in need of major repairs (42.0% of low rise dwellings and 35.3% of the stock at large) the influence of income constraints constitutes a major obstacle to the renovation of the stock with the greatest repair requirements.

TABLE 4.3
REPAIR REQUIREMENTS AND INTENTIONS TO RENOVATE
BY REPAIR NEED AND INCOME: HOMEOWNERS

REPAIR NEED AND HOUSEHOLD INCOME	AVERAGE COST OF REPAIRS REQUIRED(1) (1986) ($)	PROPORTION PLANNING TO RENOVATE (1987) (%)	AVERAGE VALUE OF PLANNED RENOVATIONS (1987) ($)	RATIO OF PLANNED TO REQUIRED EXPENDITURES (%)
ALL DWELLINGS				
Under $20 000	5 637	64.3	2 737	48.6
$20 000-$39 999	2 976	74.2	2 754	92.5
$40 000 or more	2 097	76.4	3 642	173.7
All Homeowners	3 377	72.4	3 172	93.9
n	955	8 272	5 005	
MAJOR REPAIRS				
Under $20 000	10 376	81.1	3 537	34.1
$20 000-$39 999	4 670	88.3	5 150	110.3
$40 000 or more	5 081	90.6	6 035	118.8
All Homeowners	6 989	86.2	4 933	70.6
n	185	751	499	
MINOR REPAIRS				
Under $20 000	5 496	79.7	3 472	63.2
$20 000-$39 999	3 174	89.1	3 019	95.1
$40 000 or more	1 834	90.4	3 402	185.5
All Homeowners	3 640	87.4	3 243	89.1
n	251	1 746	1 251	
REGULAR MAINTENANCE				
Under $20 000	2 345	55.1	1 922	82.0
$20 000-$39 999	2 047	67.5	2 232	109.0
$40 000 or more	1 428	71.8	3 475	243.3
All Homeowners	1 818	66.4	2 849	156.7
n	470	5 527	3 152	

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Average cost of repair expenditures estimated by the building experts.

b) Impacts of Renovation on Tenants

Unlike the owner-occupied sector, where the housing consumer is also the principal decision agent regarding renovation activity, a different set of problems can emerge in the rental sector because of the separation of these roles. In particular, because they usually lack direct involvement in the renovation decision making process, renters may experience problems resulting from renovation activity that homeowners with the same income levels do not.

There are two principal ways in which the renovation process can detrimentally affect tenants. The first problem concerns the displacement of in situ tenants due to the renovation process. The second problem stems from the impacts of renovation on housing affordability.

(i) Displacement

In practice, it is difficult to determine the magnitude and impacts of renovation-induced tenant displacement. Whether tenants are displaced through eviction prior to renovation or due to rent increases to recover renovation costs, those affected most by the renovation process often elude the most elaborate of sample designs and survey procedures. Since most surveys of the effects of renovation are after the fact, discussions of the impacts of renovation on tenants are often speculative in nature. Notwithstanding these constraints, the National Housing Study provides some insights into the nature of such impacts.

An indirect indication of the potential magnitude of tenant displacement can be discerned by examining the moving plans of tenants. Roughly one third of all tenants surveyed indicated that they planned to move within the following twelve month period. This is similar to tenant mobility rates in general of approximately 30 per cent. Tenants planning to move were asked to rate the importance of renovation related factors in motivating their plans. The responses are compiled in Table 4.4.

TABLE 4.4
FACTORS INFLUENCING THE MOVING INTENTIONS OF TENANTS

IMPORTANCE(1)	REASONS RELATED TO FORTHCOMING RENOVATIONS		
	TOLD TO LEAVE (%)	AVOID RENT INCREASE (%)	OTHER REASONS (%)
Important(1,2,3)	9.1	19.4	85.8
Moderately Important(4)	10.8	12.9	11.5
Not Important(5,6,7)	80.1	67.7	2.6
Number of Cases	524	536	460

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Importance rated on a 7-point scale from 1 - Not at all important to 7 - Extremely important.

The data indicate that one-fifth of this group rated as important being told to move due to the impending renovation work. A somewhat larger proportion (32.3%) indicated that anticipated rent increases related to renovation work were an important factor contributing to their decision to move. While these figures indicate the potential magnitude of renovation-induced displacement, the majority of those planning to move cited "other" reasons as being important. As the respondents were allowed to provide multiple responses, it is difficult to isolate the potential displacement which is directly related to the renovation activity.

The National Housing Study data suggest that roughly 8.5% per cent of tenants occupying dwellings which underwent renovation in 1985 (and who remained in the same dwelling in 1986) were temporarily displaced while renovations were in progress. The magnitude of "permanent" displacement is much more difficult to assess, however, as permanently displaced tenants will not have been present to respond to the NHS survey in 1986.

(ii) **Rent Increases and Affordability Problems**

Of those tenants surveyed in 1986 who occupied dwellings renovated in 1985, 18.6 per cent reported rent increases immediately after renovation. The data provided in Table 4.5 illustrate the magnitude of the rent increases reported. The majority of rent increases were greater than 5 per cent.

TABLE 4.5
RENT INCREASES SUBSEQUENT TO RENOVATION

PERCENTAGE INCREASE IN RENTS (%)	PROPORTION OF UNITS (%)
1 - 5	27.5
6 - 10	37.1
More than 10	35.4
Average Increase (% of pre-reno. rent)	11.7
Number of Cases	105

SOURCE: National Housing Study, CMHC, 1986.

The rent increases reported in the National Housing Study survey are likely to underestimate those prevailing in actuality. This is because the data were collected from tenants still occupying the renovated unit in the year subsequent to renovation. Tenants occupying units with the largest rent increases would be more likely to have been displaced and would therefore not be part of the National Housing Study survey.

The tenants reporting rent increases subsequent to renovation were also asked to indicate whether financial problems were created as a result. Table 4.6 contains the tenant responses, grouped by the severity of the problem experienced. Seventeen per cent indicated that the rent increase caused them a serious financial problem. Just under two thirds of tenants indicated that they experienced some financial problem as a result of renovation related rent increases. However, the severity of the rent increases are likely understated due to the nature of the survey. As already noted, many of the tenants for whom rent increases were a serious problem are likely to have sought more affordable housing in the time intervening between the completion of renovations and the time at which the survey was undertaken.

TABLE 4.6
SEVERITY OF PROBLEMS CAUSED BY RENT INCREASES SUBSEQUENT TO RENOVATION

SEVERITY OF PROBLEM CAUSED BY RENT INCREASE (1)	PROPORTION OF UNITS (%)	AVERAGE PERCENTAGE INCREASE (%)
Serious Problem (1,2)	16.9	17.6
Moderate problem (3,4,5)	48.9	11.4
Not a problem (6,7)	34.2	10.4
Overall	100.0	11.7
Number of Cases	121	

SOURCE: National Housing Study, CMHC, 1986.

NOTES: 1. Severity rated on a 7-point scale from 1-Very Serious to 7-Not a Problem.

2. Market Efficiency Issues

In this section, several possible sources of market inefficiencies are examined which may affect the demand for renovation. These include financial constraints, government regulations, imperfect information and externalities. Each issue is examined using data from the National Housing Survey on renovation activities and the factors influencing the owner's decision. The discussion focuses on homeowners and landlords who, as property owners, are the principal decision makers.

a) Financial Constraints

Financial factors present an obvious potential impediment to renovation activity. There are two aspects to this problem. The first potential barrier is one posed by the costs of the renovation work itself. Inadequate access to financing may represent another potential problem area.

Previous evidence suggests that the availability of financing is not a major factor impeding renovation activity. Almost all renovator respondents to the National Housing Study (98% of homeowners, 97% of landlords) indicated that they used personal savings or income to finance all or part of the renovations which they undertook in 1985. Only 26 per cent of homeowners and 35 per cent of landlords reported using a bank loan. In

addition, 7 per cent of homeowners and 16 per cent of landlords reported using a mortgage to finance the work. A recent survey of lenders concluded that "...Canadians generally have good access to financing for home improvements."[1] The report goes on to observe that "home improvement loans are considered by most lenders to be less risky than other types of loans because, in most cases, there is substantial equity involved in the property and the borrowers are more credit worthy than the average borrower".

Table 4.7 illustrates the frequency with which financial factors were reported by homeowners as reasons for not renovating among those respondents who recognized the need for renovation work to their dwellings. Among this group of homeowners, the cost of renovations stands out as the principal reason for not undertaking renovations in 1985.[2]

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[1] Clayton Research Associates, Survey of Lenders Financing Home Improvements, a report prepared for the Program Evaluation Division, CMHC, 1985.

[2] As previously discussed, this response could be due to affordability, perception or personal preference of the homeowners.

TABLE 4.7
FINANCIAL CONSTRAINTS ON RENOVATION BEHAVIOUR OF HOMEOWNERS

SELECTED DWELLING AND HOUSEHOLD CHARACTERISTICS	REASONS CITED FOR NOT RENOVATING IN 1985 (WHERE NEED FOR RENOVATION WORK WAS RECOGNIZED)				
	HIGH COSTS (%)	INTEREST RATES (%)	LOAN TERMS (%)	LOAN REFUSAL (%)	NUMBER OF CASES
ALL HOMEOWNERS	41.0	4.3	1.3	1.6	1 784
REGION					
Atlantic	57.7	4.1	2.0	4.7	498
Quebec	30.0	3.7	1.3	0.3	300
Ontario	36.8	3.9	0.8	2.3	258
Prairies	48.2	5.6	1.7	1.1	455
British Columbia	44.7	2.9	1.1	1.1	273
SETTLEMENT SIZE					
Urban	36.6	4.0	1.1	1.3	970
Rural	49.3	4.6	1.6	2.4	684
PERIOD OF CONSTRUCTION					
Prior to 1921	45.2	5.1	0.7	2.6	324
1921-1940	38.6	2.7	1.8	1.7	201
1941-1960	46.5	4.0	1.9	1.4	386
1961-1986	37.4	4.4	1.1	1.3	873
DWELLING CONDITION					
Major Repairs	57.6	4.1	2.0	4.7	363
Minor Repairs	47.6	4.8	1.8	1.5	571
Regular Maintenance	29.1	3.6	0.8	0.5	778
HOUSEHOLD INCOME					
Less than $20 000	47.9	3.6	1.0	2.9	721
$20 000-$29 999	44.5	5.5	2.5	1.3	334
$30 000-$39 999	43.1	5.0	1.2	0.9	258
$40 000-$49 999	34.1	3.8	1.7	0.4	187
$50 000 or more	27.1	3.9	0.7	0.7	294
MORTGAGE PAYMENT TO INCOME RATIO					
No Mortgage	41.1	3.0	1.3	1.2	788
1 - 14 Per Cent	41.5	5.3	0.8	1.5	395
15 - 29 Per Cent	43.0	3.7	1.9	1.2	306
30 Per Cent or More	39.6	5.6	2.9	5.6	120

SOURCE: National Housing Study, CMHC, 1986.

Forty-one per cent of homeowners cited "high cost of repairs" as a reason they did not undertake repairs which they acknowledged the dwelling needed. Homeowners residing in rural areas, in the Atlantic and Prairie regions and those occupying dwellings in need of major repair cited high costs with the greatest frequency. Also, as might be expected, a clear association emerges between household income and the frequency with which costs were cited as a barrier to renovation. Those households earning less than $20 000 per annum were disproportionately influenced by the cost of renovation.

Compared to the influence of the costs of renovation, factors related to obtaining financing for renovation work were cited much less frequently. Nationally, high interest rates were cited by less than 4.3 per cent of homeowner respondents. The low incidence of financing problems is most likely related to the fact that the majority of renovation work is not financed but is paid for directly from savings or income. Access to financing was found to be more of a problem in some rural areas and where the homeowner cannot afford any payments, regardless of terms. Table 4.7 shows that loan refusal, while not common, was more likely in rural areas, in the Atlantic and Ontario; for older dwellings and for dwellings which required major repairs and hence, higher repair costs; and for households with low incomes and high shelter cost to income ratios who would be unlikely to afford repayment.

The relative impact of financial impediments on the renovation decisions of landlords is reported in Table 4.8. Some aspects of the influence of financial factors are broadly similar to those affecting homeowners. Accordingly, the cost of renovations was cited most frequently (30.6%), followed by high interest rates (8.7%), unsuitable loan terms (6.0%), and loan refusals (1.7%).

TABLE 4.8
FINANCIAL CONSTRAINTS ON RENOVATION BEHAVIOUR OF LANDLORDS

SELECTED DWELLING AND HOUSEHOLD CHARACTERISTICS	REASONS CITED FOR NOT RENOVATING IN 1985 (WHERE NEED FOR RENOVATION WORK WAS RECOGNIZED)				
	HIGH COSTS (%)	INTEREST RATES (%)	LOAN TERMS (%)	LOAN REFUSAL (%)	NUMBER OF CASES
ALL LANDLORDS	30.6	8.7	6.0	1.7	122
REGION					
Atlantic	49.2	3.4	0.0	0.0	32
Quebec	33.3	4.4	8.9	2.2	45
Ontario	25.0	15.0	5.0	0.0	20
Prairies	26.0	10.9	5.7	5.7	16
British Columbia	22.2	11.1	0.0	0.0	9
SETTLEMENT SIZE					
Urban	24.8	8.7	3.7	3.7	54
Rural	45.0	3.2	10.4	0.0	11
PERIOD OF CONSTRUCTION					
Prior to 1921	35.6	8.2	3.5	0.0	33
1921-1940	48.7	18.4	17.7	3.0	28
1941-1960	31.1	9.8	0.0	0.0	26
1961-1986	9.9	0.0	3.5	3.5	35
DWELLING CONDITION					
Major Repairs	60.5	17.8	13.8	0.0	28
Minor Repairs	26.2	11.4	3.0	0.0	40
Regular Maintenance	16.3	1.7	4.0	4.0	51
NUMBER OF DWELLING UNITS					
1	26.9	10.2	6.2	0.0	30
2-5	33.3	10.1	6.9	0.0	49
Over 5	21.3	5.8	3.9	3.9	31
EXPECTED SELLING PRICE PER UNIT					
Less than $30 000	33.8	10.0	5.7	2.9	41
$30 000 or more	26.5	4.4	4.8	0.0	48
MORTGAGE OUTSTANDING					
No	44.2	8.4	9.4	2.1	41
Yes	26.1	11.1	3.6	1.8	64
OWNERSHIP					
One Individual	34.1	9.2	8.9	3.0	70
More Than One Individual	22.5	10.6	3.9	0.0	29
Corporation	29.1	6.6	0.0	0.0	15
Other	31.6	0.0	0.0	0.0	4
PORTION OF TOTAL ASSETS					
0 - 49 Per Cent	19.8	7.2	2.1	2.1	52
50 - 100 Per Cent	51.1	15.4	6.3	2.7	33

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Indicates fewer than 20 observations.

Despite this general similarity, the data suggest that the costs of renovations have exerted less influence over the decision of landlords not to renovate than was the case for homeowners. However, the influence of the costs and terms of renovation financing in both absolute and relative terms was stronger for landlords than homeowners. As was the case with homeowners, the strictest impediment to financing renovation activity (loan refusal) was rarely cited as a reason for not renovating in 1985.

Different groups of landlords and different segments of the housing stock have been affected by financial impediments in varying degrees. Greater sensitivity to the cost of repairs was experienced by landlords of: dwellings in the Atlantic; dwellings constructed between 1921 and 1940; dwellings in need of major repairs; and dwellings which represent more than 50 per cent of a landlord's total assets. In general, it appears that landlords operating small, older, and lower valued rental properties are more sensitive to the costs of renovation.

With one or two exceptions, the influence of renovation financing follows the same general pattern as that for renovation costs. Interest rates were cited as a larger than average problem in Ontario while unsuitable loan terms posed a greater problem in Quebec. Interest rates and loan terms were, however, not cited in the Atlantic as reasons for not renovating in 1985.

b) Government Regulations[1]

The extent of government involvement in the renovation market, as outlined in Chapter III, makes it a key actor in influencing renovator behaviour. The National Housing Survey asked non-renovating property owners what factors influenced their decision not to renovate in 1985. Too much "red tape" and potential property tax increases were two areas of government involvement cited as minor concerns after "high cost of renovation work" and "other business more important". Red tape was cited by only 2.6 per cent of homeowners and 5.4 per cent of landlords; property taxes were cited by 7.2 per cent of homeowners and 8.8 per cent of landlords.

The influence of these government related factors on non-renovators is broken down by selected dwelling and owner characteristics in Table 4.9 for homeowners and in Table 4.10

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[1] This Discussion is based on Part V research on regulatory impacts completed for the Program Evaluation Division by S. Hamilton, A. Phipps, Commonwealth Historic Resource Management, and M. Denhez.

TABLE 4.9
IMPACT OF GOVERNMENT ON RENOVATION ACTIVITY
1985 NON-RENOVATORS
HOMEOWNERS

SELECTED DWELLING AND OWNER CHARACTERISTICS	REASONS CITED FOR NOT RENOVATING IN 1985 (WHERE NEED FOR RENOVATION WORK WAS RECOGNIZED)		
	RED TAPE INCIDENCE (%)	POTENTIAL PROPERTY TAX INCREASE INCIDENCE (%)	NUMBER OF CASES
ALL HOMEOWNERS	2.6	7.2	1 784
PROVINCE			
Newfoundland	5.0	4.0	101
Prince Edward Island	8.9	3.6	180
Nova Scotia	1.7	3.3	56
New Brunswick	1.9	9.9	161
Quebec	3.0	8.3	300
Ontario	2.3	8.1	258
Manitoba	3.5	7.1	113
Saskatchewan	3.8	6.8	132
Alberta	1.0	7.6	210
British Columbia	2.9	4.0	273
SETTLEMENT SIZE			
Urban	2.0	7.5	970
Rural	4.0	6.4	684
PERIOD OF CONSTRUCTION			
Prior to 1921	4.3	5.8	324
1921-1940	3.0	7.5	201
1941-1960	3.4	7.2	386
1961-1986	1.5	7.7	873
DWELLING CONDITION			
Major Repairs	3.9	6.1	363
Minor Repairs	3.0	5.3	571
Regular Maintenance	1.6	8.4	778
HOUSEHOLD INCOME			
Less than $20 000	3.3	8.1	771
$20 000-$29 999	2.7	7.5	334
$30 000-$39 999	2.7	10.0	258
$40 000-$49 999	2.7	5.3	187
$50 000 or more	1.2	4.5	294
MORTGAGE PAYMENT TO INCOME RATIO			
No Mortgage	4.1	8.7	788
1 - 14 per cent	2.3	4.6	395
15 - 29 per cent	0.9	6.4	306
30 per cent or more	1.8	5.9	120

SOURCE: National Housing Study, CMHC, 1986.

TABLE 4.10
IMPACT OF GOVERNMENT ON RENOVATION ACTIVITY
1985 NON-RENOVATORS
LANDLORDS

SELECTED DWELLING AND OWNER CHARACTERISTICS	REASONS CITED FOR NOT RENOVATING IN 1985 (WHERE NEED FOR RENOVATION WORK WAS RECOGNIZED)		
	RED TAPE INCIDENCE (%)	POTENTIAL PROPERTY TAX INCREASE INCIDENCE (%)	NUMBER OF CASES
ALL LANDLORDS	5.4	8.8	122
REGION			
Atlantic	0.0	4.1	32
Quebec	2.2	8.9	45
Ontario	10.0	10.0	20
Prairies	13.0	7.2	16
British Columbia	0.0	11.1	9
SETTLEMENT SIZE			
Urban	1.6	2.7	54
Rural	0.0	0.0	11
PERIOD OF CONSTRUCTION			
Prior to 1921	5.3	6.2	33
1921-1940	13.3	18.9	28
1941-1960	4.2	8.5	26
1961-1986	0.0	3.0	35
DWELLING CONDITION			
Major Repairs	9.6	17.5	28
Minor Repairs	0.0	3.8	40
Regular Maintenance	7.4	7.9	51
NUMBER OF DWELLING UNITS			
1	0.0	0.4	30
2-5	0.0	11.2	49
More than 5	15.5	11.6	31
MORTGAGE OUTSTANDING			
No	4.8	9.3	41
Yes	5.4	8.9	64
OWNERSHIP			
One Individual	2.9	8.6	70
More than one Individual	6.0	10.3	29
Corporation	10.1	10.1	15
Other	0.0	0.0	4
PORTION OF TOTAL ASSETS			
0-49 per cent	5.2	5.4	52
50-100 per cent	8.2	20.4	33

SOURCE: National Housing Study, CMHC, 1986

for landlords. While these factors were generally cited infrequently, some differences exist across regions and homeowner characteristics. The influence of "red tape" varied by province from less than 2 per cent in Alberta, Nova Scotia and New Brunswick to up to 10 per cent in Prince Edward Island and Newfoundland. Homeowners also cited red tape more frequently as need for repairs and dwelling age increased or as household income decreased. Interestingly, "red tape" was cited as a reason for not renovating more in rural areas as compared to urban areas. For landlords, the small sample size makes interpretation of the data less reliable. However, landlords of larger projects, and projects built between 1921 and 1940, more frequently cited these factors.

Potential property tax increases were cited more frequently as a reason for not renovating both by homeowners (7.2%) and landlords (8.8%). For homeowners this was cited least often in Nova Scotia, Prince Edward Island, Newfoundland and British Columbia and most often in New Brunswick, Quebec and Ontario. The regional variation among landlords citing potential property tax increases was somewhat different being highest in British Columbia and Ontario and lowest in the Atlantic Region. Potential property tax increases were cited much more than average by owners of rental properties built between 1921 and 1940 (18.9%), in need of major repairs (17.5%), with multiple units (more than 11%) and which represent over half of the landlord's total assets (20.4%).

(i) Maintenance and Occupancy Bylaws

Recent research findings show that the impact of Maintenance and Occupancy (M & O) bylaws ranges from continued deterioration or abandonment to property improvement. The extent to which these bylaws prompt owners to renovate appears to depend upon the degree of financial assistance provided by municipalities in support of the required work.

The main reason cited for little or no property upgrading in response to M & O bylaws is the lack, or small amount, of bylaw enforcement. While the number of dwellings affected is unknown, the problem may be relatively widespread. There are three implementation difficulties inherent to the strict enforcement of M and O bylaws: the high manpower requirements, the possible inequities to low income property owners and to low income tenants if displacement occurs, and the minimal legal sanction afforded municipalities to require owner co-operation. Nevertheless, municipal governments in Sault Ste. Marie and Montreal, for example, have successfully combined code enforcement with the offering of moral support, technical advice and financial assistance to promote the repair of substandard housing.

(ii) Building Codes

The enforcement of building codes ensures that renovation design and construction solutions meet minimum standards of quality. Recent studies demonstrate that it is the "new construction" orientation of building codes, the uneven application of the code to building renovation and the lengthy process required to obtain compliance approval that impose the most significant costs on renovating.

As a result, renovation work is often done illegally, in contravention of the code; work is discouraged from being done; or buildings become too expensive to renovate and are consequently demolished. A review of recent research found several studies which supported this hypothesis.[1] A report to the Ontario government suggested that the large number of illegal rental dwelling conversions in that province may be in response to an overly restrictive building code. A Toronto Study assessed the time delay in obtaining plan approval as a major factor affecting the viability of renovation proposals. With regard to larger scale or more complex projects, the same study indicates that building inspectors enforcing the code have been perceived as being inconsistent in their judgements, leading to uncertainty among prospective renovators, and thereby deterring renovation.

(iii) Heritage Legislation

Heritage legislation, enacted by provinces and/or municipalities, places restrictions on property use and development by a process of legal designation. It is an attempt to overcome two types of problems which may inhibit the amount of heritage conservation work undertaken by owners. First, owners may be unaware of the social significance of their property and so do not incorporate this factor in their decision to renovate. Second, owners may only value the benefit to themselves of conserving the heritage condition of their property and so underestimate its higher social value.

A recent study done for CMHC concludes that, even with government involvement through the designation of the property, the level of heritage-sensitive renovation of designated properties is below the amount of work required.[2] In the

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[1] Public Regulation and its Effects on Residential Renovation, Program Evaluation Division, CMHC, 1984.

[2] Commonwealth Historic Resource Management, Government Involvement in Residential Renovation, a report prepared for the Program Evaluation Division, CMHC, 1986.

National Housing Study, about two per cent (163 cases) of the homeowner respondents indicated that their dwelling was recognized or designated as a heritage property. Of these, 17 per cent (28 cases) were dwellings constructed prior to 1920. Over half of the designated properties were in the province of Quebec. While owners of heritage properties were only slightly more likely to have undertaken renovation work in 1985, when compared to owners of non-heritage properties (59% vs. 54%), on average, they spent considerably more ($5 423 vs. $3 325). The small sample size makes analysis of heritage property renovations statistically unreliable. However, Appendix D provides some details on the findings from the National Housing Study based on the available information.

(iv) Property Taxation

There are few empirical studies which quantify the impact of renovation on property values and establish a link to changes in property taxes. However, a literature review revealed some recent studies which addressed the relationship.[1] Case studies focus on measuring the extent to which there is a "fear of reassessment" inhibiting renovation. A study of homeowners who recently moved to the inner city of Saskatoon suggests that the anticipation of reassessment is, in fact, a minor deterrent to those not renovating, compared to other factors, such as financial constraints.

The evidence is inconclusive about the impact of reassessment on rental property owner behavior. A survey of absentee landlords owning buildings in federally-designated renovation areas of Vancouver asserts that reassessment is a major disincentive to property improvement, but without empirical justification. In another case study, landlords were surveyed who had applied for federal renovation program assistance. In none of the open-ended replies was reassessment cited as a factor affecting the decision to renovate or not renovate.

With the move to instituting minimum thresholds for value of work and the exclusion of non-structural types of renovation as criteria for reassessment, the potential disincentive of reassessment should be lessened. However, there remains the practice of avoiding reassessment by not applying for a building permit. The associated impact is more likely to be an increased risk of lower quality work being done, since the municipal building inspection process is circumvented, rather than a reduction occurring in the amount of work undertaken.

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[1] Public Regulation and Its Effects on Residential Renovation, Program Evaluation Division, CMHC, 1984.

(v) **Rent Review**

There are two key aspects of rent review legislation which affect the level of renovation undertaken: the rate of return permitted on the renovation investment, and the type of work or property exempted. Regulated rents which disallow a market rate of return on the unrenovated property may result in disinvestment and property deterioration. If substantial renovation work or buildings renting above a set limit are exempt, then large scale types of work resulting in higher rents may result.

There have been two types of studies which shed some light on the impacts of rent legislation on renovation.[1] Both types assess the relationship in an indirect manner. The first type of study examines the impact of rent review from the perspective of investment in new construction and maintenance. There is some evidence of a declining incentive to invest in rental housing, at least in Ontario and Quebec. A 1984 survey of rental housing in Ontario shows that the real rate of investment return declined since rent review was introduced in that province. Although operating expenses can be passed through the review process, they have risen as a percentage of real revenue, resulting in a decline in the rate of profit. Declines in annual returns have been documented for Quebec rental housing, although the investments are still viewed as earning a competitive rate of return.

The second type of study, asking respondents to report on rental market operating conditions, treats rent review as one of many possible factors influencing property owner behavior. The results of landlord and tenant surveys are inconclusive, however. Tenants cite neutral and landlords report generally negative rent review impacts on maintenance. This difference may reflect the inherent difficulty of measuring changes in building condition. Small annual declines in maintenance expenditures may be impossible to detect immediately, or by (non-qualified) occupants.

c) Imperfect Information

Investments in renovation which address dwelling adequacy requirements are likely to occur only where the owners of residential properties possess adequate information concerning the need for repairs and the costs and benefits of undertaking renovation work. Data collected as part of the National Housing Study permit the examination of the impact of property owners' perceptions of repair need on their renovation intentions and the usage and usefulness of available information sources.

(i) Assessing the Need for Repairs

It has been demonstrated that property owners and occupants have some difficulty in assessing the need for repair of their dwelling. For the sub-sample of dwellings where the assessments of both occupants and building experts were available for analysis, two out of every five occupants reached different conclusions with respect to the need for repairs from those of the experts. While errors were made in both directions, resulting in both underestimates and overestimates of the need for repair work, the tendency to underestimate was considerably more pronounced. The degree to which occupants accurately identified repair requirements varied among different categories of households and dwellings. These differences can likely be attributed to a variety of factors pertaining not solely to technical competence but also to length of occupancy, consumer expectations and community norms.

Whatever the reasons may be for the lack of recognition of repair requirements, if this perception results in the absence of renovation activity where conditions suggest that it is warranted, the net result may be the premature deterioration of the housing stock and the need for more costly repairs at a later stage. In order to examine the impact of perceptions of renovation need on renovation behavior, the renovation intentions of homeowners residing in dwellings deemed by building experts to be in need of major or minor repairs are examined below.

As shown in Table 4.11, homeowners who underestimated the need for repairs have lower expressed intentions to undertake renovation work in 1987. This is especially the case in Quebec and Ontario, for older dwellings, where length of occupancy is over ten years, for the least educated owners and, interestingly, for the highest household incomes. It is apparent, however, that the majority of homeowners occupying dwellings assessed by the experts to require repairs do plan to renovate in 1987, regardless of whether they have "underestimated" the need for repairs or not. If the respondents act on their expressed intentions, the lack of an accurate perception of renovation need may not necessarily result in the accelerated deterioration of housing conditions. However, it is also possible that homeowners who underestimate the need for repair may also not undertake needed repairs if they do renovate in the future. Rather, they may undertake improvements or additions thereby leaving the repair need status of the stock unchanged.

TABLE 4.11
RENOVATION INTENTIONS, BY ACCURACY OF HOMEOWNER PERCEPTIONS OF THE NEED FOR REPAIRS

DWELLINGS IN NEED OF MAJOR OR MINOR REPAIRS(1)

SELECTED DWELLING AND HOUSEHOLD CHARACTERISTICS	REPAIR NEED RECOGNIZED			REPAIR NEED UNDERESTIMATED		
	(n)	(%)	PLANNING TO RENOVATE (%)	(n)	(%)	PLANNING TO RENOVATE (%)
ALL HOMEOWNERS	254	31.4	93.3	469	60.0	79.3
SETTLEMENT SIZE						
Urban	121	31.1	95.3	241	60.8	82.2
Rural	120	33.4	89.0	194	59.0	73.8
REGION						
Atlantic	91	32.1	89.2	164	59.3	85.1
Quebec	59	35.3	96.3	98	58.7	75.0
Ontario	23	29.9	95.2	47	61.0	78.3
Prairies	57	31.8	90.7	102	57.9	81.8
British Columbia	24	26.4	90.9	58	63.7	80.4
PERIOD OF CONSTRUCTION						
Prior to 1941	99	39.5	97.6	115	51.7	77.0
1941-1960	72	37.8	92.5	111	50.2	78.8
1961-1986	83	22.7	89.7	243	70.9	80.5
LENGTH OF OCCUPANCY						
Less than 5 years	91	33.0	95.3	149	56.9	84.8
5-10 years	48	27.0	88.8	160	60.8	82.9
Over 10 years	115	32.4	93.6	209	62.5	72.3
HOUSEHOLD INCOME						
Less than $20 000	101	36.2	90.1	144	55.0	77.1
$20 000-$29 999	54	36.4	93.6	75	55.6	75.1
$30 000-$39 999	37	26.0	95.2	89	61.4	83.1
$40 000-$49 999	25	20.1	95.7	82	71.4	86.5
$50 000 or more	37	35.0	95.6	79	60.4	74.0
EDUCATIONAL ACHIEVEMENT						
Primary School	39	35.5	93.6	57	57.2	67.0
High School	94	27.1	93.6	190	62.0	82.7
College	44	33.7	92.5	80	58.5	80.9
University	60	33.1	92.2	119	60.3	79.0

SOURCE: National Housing Study, CMHC, 1986, Matched Homeowner and Expert Cases

NOTE: 1. As identified by CMHC building experts.

Inadequate understanding of the need for repair and the choice of appropriate solutions has likely served as an impediment to optimal investments in renovation in the past. With the expansion of renovation activity, there has been an increase in both the levels of expertise in the renovation industry and in the availability of instruction and educational materials aimed at both the industry and the property owner. How successful have these sources of information been in promoting the abilities of property owners to judge the need for repair work and in choosing the right solution?

To properly answer this question it would be necessary to compare the knowledge of renovators both before and after the introduction of educational materials and programs. Unfortunately, such an analysis is not possible with existing data sources. However, the National Housing Study does provide some insight into the contemporary usage and usefulness of existing information sources.

Respondents, who undertook renovation work in 1985, were asked to report on the sources of information which they used in the identification of problems, in choosing renovation solutions and in completing the work. The response categories included training courses, professional advice, written materials (booklets and pamphlets) and word of mouth. Those reporting the use of such materials were also asked to provide a rating of their usefulness (on a 1 to 7 scale).

The data, as shown in Table 4.12, suggest that while renovator homeowners relied on a broad variety of information sources in undertaking renovation work, they relied most heavily on personal experience and the experiences of others passed on by word-of-mouth. Professional advice and written materials were the next most favoured sources, with training courses trailing considerably behind. What this suggests is that homeowners rely fairly heavily on informal information sources. Landlords reported similar patterns of information use. The principal exception is that professional advice was somewhat more popular among landlord renovators than was word-of-mouth.

TABLE 4.12
USAGE AND USEFULNESS OF EXISTING INFORMATION SOURCES

INFORMATION SOURCE	PER CENT REPORTING USAGE		AVERAGE USEFULNESS RATING(1)		PER CENT FINDING USEFUL(2)		NUMBER OF CASES	
	HO	LLD	HO	LLD	HO	LLD	HO	LLD
Personal Experience	89.7	92.0	6.0	6.0	83.8	85.1	3333	430
Word-of-Mouth	76.0	71.2	5.0	4.6	61.4	55.3	2440	264
Professional Advice	61.9	73.2	5.3	5.2	69.3	68.3	1997	284
Books & Pamphlets	60.7	54.6	4.6	4.0	49.1	42.9	1894	194
Training Courses	22.3	28.2	2.9	2.6	25.4	14.2	671	92

SOURCE: National Housing Study, CMHC, 1986.

NOTES: 1. Usefulness ratings ranged from "Not at all useful" (given a score of 1) to "Extremely useful" (given a score of 7).

2. Given a rating of 5, 6 or 7 (more than "Somewhat useful").

These general patterns of information usage are mirrored in the degree to which renovators found them to be useful. Personal experience was found to be the most useful to renovators, while training courses were the least useful. The one minor exception to this general correspondence of usage and usefulness can be found in the relative rankings of professional advice and information garnered by word-of-mouth. While word-of-mouth was used more frequently by homeowners than professional advice, the latter was found to be more useful in practice.

The finding that training courses and written materials were found to be the least useful of existing sources of information is a critical one, insofar as they may well be the principal media through which information may be provided to the broadest number of users in the most cost-effective manner. This suggests that the content and use of these information sources needs to be re-evaluated.

d) Neighbourhood Effects

A key market problem is raised by the possibility that externalities (neighbourhood effects) influence homeowners'

decisions to renovate. Indeed, it is hypothesized that poor quality or declining neighbourhoods impede renovation activity.

Externalities associated with housing markets are usually classified according to the manner in which they affect consumers of housing. Externalities which have an indirect effect on consumers include fire hazards and crime. The available evidence on the extent of these indirect effects is inconclusive. Externalities can also have a direct effect since the value of the consumer's property is affected by the surrounding neighbourhood. These effects may act as an impediment to renovation activity.

There has been much debate in recent years about the influence of neighbourhood effects on individuals' decisions to renovate. Specifically, it has been asserted that there is a lesser tendency to renovate in poor quality/declining neighbourhoods as opposed to good quality/improving neighbourhoods. The reason for the reluctance to renovate in a poor/declining neighbourhood is that there are no assurances that others in the neighbourhood will also renovate. Renovation may be profitable to all should all renovate. The greatest gains, however, are made by the last owners to not renovate and thereby capture the windfall created by others. The first owners to renovate have the greatest chance that they will not receive the full value of the improvement should enough neighbouring homeowners not renovate. This situation is commonly referred to as the prisoner's dilemma. In this case, a united action would benefit all but no single owner can afford to act independently and without the assurances that others would follow. In the absence of collective action, renovation investment may be sub-optimal from a social point of view. In such circumstances, government action can effectively promote renovation activity by reducing uncertainty concerning neighbourhood quality and stability.

Empirical research undertaken to date has not provided strong support for the existence of such neighbourhood effects. One approach has been to examine the effects of the Residential Rehabilitation Assistance Program (RRAP) on property values in inner-city neighbourhoods.[1] This study could not find evidence to support the hypothesis that use of RRAP funds creates positive externalities. Similarly, the RRAP Evaluation found no evidence of an increase in private renovation as a result of the

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[1] Mark, J and M. Goldberg, An Analysis of the Effect of the Residential Rehabilitation Assistance Program on Housing Values, University of British Columbia, 1984.

program.[1] However, the evaluation did find a better perception of house and neighbourhood quality by residents in RRAP areas, than in comparable non-RRAP areas. Another study found that the spillover effects from privately-funded housing renovations only marginally affect the renovation expenditures of neighbours.[2] A more recent study found that neighbourhood factors and government policy factors had only a marginal influence on those who had done renovations in two inner city neighbourhoods.[3] Other studies suggest the decision to renovate is individually-based and that financial constraints are more important.

Evidence from the National Housing Study supports the contention that spillover effects due to housing renovation are not significant for homeowners when looking at present neighbourhood quality, but are more significant when looking at the change in neighbourhood quality. Neighbourhood effects hold greater significance for landlords for both present neighbourhood quality and change in neighbourhood quality. Neighbourhood quality is measured by homeowner and landlord perceptions of the quality of parks, schools, shopping and day-care facilities in the area currently and compared to five years previously.

Table 4.13 illustrates the relationship between 'renovation activity', 'neighbourhood quality', 'change in neighbourhood quality', and 'condition of dwelling' for homeowners and landlords. The statistics represent the percentage of homeowners/landlords who renovated and who plan to renovate, by neighbourhood quality and condition of dwelling. All statistics are based on homeowner and landlord ratings and responses to the National Housing Study questionnaire.[4] Respondents were asked to rate neighbourhood quality using a 7-point scale from excellent to terrible.

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1 Residential Rehabilitation Assistance Program Evaluation, Program Evaluation Division, CMHC, 1986.

2 McConney, M. E., An Empirical Investigation of the Repair Behaviour of Neighbouring Homeowners, Thesis: University of Pennsylvania, 1983.

3 Phipps, Alan G., Government Involvement in Residential Renovation, a report prepared for the Program Evaluation Division, CMHC, 1986.

4 In this analysis, the results obtained when using the building expert ratings of dwelling condition were consistent with those obtained using the homeowner ratings.

TABLE 4.13
RENOVATION ACTIVITY BY CONDITION OF DWELLING
AND QUALITY OF NEIGHBOURHOOD SERVICES

	CONDITION OF DWELLING (1986)			
	ALL (%)	MAJOR REPAIR (%)	MINOR REPAIR (%)	MAINTENANCE (%)
HOMEOWNERS				
HOMEOWNERS WHO RENOVATED IN 1985				
(n=4162)				
All	51.5	50.4	57.8	50.2
Neighbourhood Quality				
Excellent	51.7	51.2	57.9	50.3
Average	50.8	50.1	56.9	49.6
Terrible	56.1	49.7	63.0	55.0
Change in Neigh. Quality				
Improving	56.7	56.4	61.9	56.1
Stable	51.0	50.8	57.3	49.4
Declining	42.7	34.0	52.5	41.8
HOMEOWNERS WHO PLAN TO RENOVATE IN 1987				
(n=5801)				
All	71.4	85.5	86.3	65.4
Neighbourhood Quality				
Excellent	71.1	83.7	87.8	65.1
Average	70.8	85.6	85.1	64.9
Terrible	79.2	91.8	84.5	74.2
Change in Neigh. Quality				
Improving	75.6	85.1	90.7	70.0
Stable	71.1	86.8	86.3	64.7
Declining	64.6	77.2	75.7	60.3
LANDLORDS				
LANDLORDS WHO RENOVATED IN 1985				
(n=527)				
All	62.0	63.8	71.9	57.6
Neighbourhood Quality				
Excellent	64.9	66.1	76.7	60.5
Average	59.8	60.5	69.2	55.5
Terrible	34.4	71.9	22.8	19.6
Change in Neigh. Quality				
Improving	66.6	79.6	82.2	58.9
Stable	61.5	59.4	72.1	57.7
Declining	47.9	57.0	47.4	49.6
LANDLORDS WHO PLAN TO RENOVATE IN 1987				
(n=583)				
All	66.7	87.2	82.2	57.7
Neighbourhood Quality				
Excellent	68.4	88.2	85.5	59.4
Average	64.9	89.4	79.2	55.5
Terrible	63.0	52.3	77.2	71.3
Change in Neigh. Quality				
Improving	76.0	91.8	80.8	71.9
Stable	64.0	85.3	82.8	53.0
Declining	65.7	89.3	78.8	60.2

SOURCE: National Housing Survey, CMHC, 1986

Generally, it was found that 'neighbourhood quality' was not strongly associated with homeowners' decisions to renovate in 1985. However, when looking at 'change in neighbourhood quality', stronger support for the neighbourhood effects hypothesis is found. Indeed, in all categories of 'condition of dwelling', there was a marked decrease in 'renovation activity' in declining neighbourhoods versus stable or improving neighbourhoods, with the major repair category reporting the greatest decrease.

A similar pattern was observed for homeowners who plan to renovate in 1987. Again, in only one category is there a lower incidence of 'renovation activity' in a terrible neighbourhood versus average or excellent neighbourhoods. Similarly, when looking at 'change in neighbourhood quality' evidence of the neighbourhood effects hypothesis is apparent in all categories, particularly the minor repair category.

A somewhat stronger pattern is apparent when looking at the landlords' data in Table 4.13. Unlike the case for homeowners, both 'neighbourhood quality' and 'change in neighbourhood quality' strongly affected landlords' decisions to renovate in 1985. Indeed, 'neighbourhood quality' seems to have had a particularly strong effect on 'renovation activity' in the minor repair and maintenance categories, with a difference between excellent and terrible neighbourhoods of 53.9 per cent and 40.9 per cent respectively. Similarly, there is support for the neighbourhood effects hypothesis when dealing with 'change in neighbourhood quality'; all categories of dwelling condition show decreased renovation activity in declining neighbourhoods.

Finally, 'neighbourhood quality' has influenced landlords' plans to renovate in 1987, particularly in the major repair category. However, an inconsistent relationship is evident in the maintenance categories for both 'neighbourhood quality' and 'change in neighbourhood quality'. A higher than expected percentage of landlords whose dwellings are in need of maintenance and who reside in terrible and declining neighbourhoods plan to undertake renovation activity in 1987.

Overall, the homeowner data do not strongly support the hypothesis of decreased renovation activity in terrible neighbourhoods when looking at 'neighbourhood quality'. However, when looking at the 'change in neighbourhood quality' there is stronger support for the hypothesis. In contrast, the landlord data provide stronger support for neighbourhood effects based on 1985 'renovation activities' for both 'neighbourhood quality' and 'change in neighbourhood quality'. However, an inconsistent relationship is evident in plans to renovate. This deviation between the homeowners' and landlords' renovation patterns may stem from the fact that landlords consider their

property more as an investment than homeowners. Hence they may be more unwilling to increase the investment (by renovating) in a terrible or declining neighbourhood where the rate of return may not be significant.

In summary, the relationship between renovation and neighbourhood quality, shown in Table 4.13, supports the neighbourhood effects hypothesis. A greater incidence of renovation activity completed and planned was found in improving and stable neighbourhoods than in declining neighbourhoods. Indeed, regression analyses indicate that 'neighbourhood quality', 'change in neighbourhood quality', age of building and income are major variables in influencing renovation activity. Appendix E contains a more complete presentation of the regression results.

e) Employment Status

Economic instability could be another possible impediment to renovation activity. It is generally believed that swings in employment strongly influence and even jeopardize the amount and type of renovation activity that is undertaken. For financial reasons, it is felt that the employed undertake more renovation work than the unemployed. However, by substituting their own labour, the unemployed can offset hired labour costs and can, therefore, also undertake a potentially wide range of renovation activity.

Data obtained from the National Housing Study seem to support this latter hypothesis. It is reported that roughly 140 part-time and/or unemployed and 2700 employed homeowners undertook renovation activity in 1985. An employed household is defined as one where either adult member is employed. An unemployed household is one where neither adult member is employed full-time and where one or both members are working part-time or are unemployed. Homeowners indicated whether they: a) paid a firm or contractor who supplied the labour and materials; b) purchased the materials themselves; or c) hired the labour themselves. It was inferred that the owner used their own labour if neither a) nor c) were indicated.

Table 4.14 reports the average expenditure for hiring firms, paying for material, paying for workers and the total expenditures on renovation work in 1985 by the fully employed versus the part-time and unemployed. Although the absolute number of unemployed is small, their average expenditures are unexpectedly high, being very comparable to those who are employed.

TABLE 4.14
AVERAGE EXPENDITURE BY EMPLOYMENT STATUS

EXPENDITURE	EMPLOYED FULL-TIME		UNEMPLOYED AND PART-TIME	
	MEAN($)	(n)	MEAN($)	(n)
Amount paid to firms for labour	3 148	1 581	3 042	63
Amount paid for materials	1 601	2 650	1 529	129
Amount paid workers directly	905	778	563	31
Total cost of work	3 396	2 674	2 594	145

SOURCE: National Housing Survey, CMHC 1986

Table 4.15 identifies the percentage of homeowners who used their own labour and/or materials in undertaking the renovation work. It is interesting to note that in 26 out of 29 categories, the unemployed reported a higher propensity to carry out renovations using their own labour and/or materials than the employed. Indeed, compared to those fully employed, it does appear that the unemployed are substituting their own labour to a much greater extent to offset costs. The few types of jobs where the employed used their own labour and/or materials more often than the unemployed are wall finishes, electrical lighting fixtures and ductwork.

TABLE 4.15
PERCENTAGE OF HOMEOWNERS USING THEIR OWN LABOUR AND/OR MATERIALS BY EMPLOYMENT STATUS AND TYPE OF JOB

TYPE OF JOB	HOMEOWNERS USING OWN LABOUR AND/OR MATERIALS EMPLOYED (1) (%)	UNEMPLOYED (2) (%)
EXTERIOR		
Sitework	72.5	82.5
Walls		
structure	73.7	77.0
finish: wood	81.4	88.1
finish: other	57.8	51.5
Roof, Chimney		
gutters, downspouts	58.6	61.0
roof coverings	50.0	66.2
chimney	52.3	74.3
Doors, Windows	59.1	72.4
Steps, Porches	75.7	79.6
INTERIOR		
Carpentry		
floors	71.3	89.6
walls	79.2	92.4
cabinets, shelves	79.3	91.4
doors	70.2	85.1
Walls		
drywall/plaster	74.0	87.9
paint/paper	85.4	91.9
Floors		
hardwood	62.8	87.2
carpet	52.4	65.2
tile	65.6	74.1
MECHANICAL SYSTEMS		
Electrical		
lighting fixtures	75.9	75.7
wiring	55.9	61.9
Heating/Cooling		
furnace	30.5	45.0
fireplace	66.3	84.5
ductwork	57.0	47.6
Plumbing		
pipes	62.4	73.8
fixtures	68.4	84.1
hot water heater	52.3	59.7
Insulation		
attic	48.3	83.1
wall	72.6	84.0
doors, windows	70.4	76.2
Number of Cases	2 683	141

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. At least one adult employed full-time.

2. Adults unemployed or part-time employed.

B. PROBLEMS AFFECTING RENOVATION FIRMS

In this section, the extent to which the renovation market is operating effectively is examined from the perspective of renovation firms. Three facets of the residential renovation industry are examined to determine the existence and magnitude of industry problems. First, the structure and operation of the industry is examined, including the size, organization and operating characteristics of firms. Second, the quality of contracted renovation work is assessed and the availability to firms of skilled labour is examined. Finally, the methods of obtaining up-to-date information and the awareness of firms of advances in renovation materials and methods is examined.

Evidence for this review is drawn from the Residential Renovation Industry Survey and the National Housing Study. The industry survey asked firms about their composition, operating practices and problems and constraints which they experienced in the course of their operations. The property owner surveys asked homeowners and landlords about their use of renovation contractors and their experiences with the renovation industry.

1. Industry Structure and Operation

a) Current Structure and Organization

Overall, the structure and operation of the renovation industry appears to be an appropriate response to the inherent nature of the renovation market. By retaining only a few employees, subcontracting according to the requirements of each job, and relying on customer financing, the typical renovation firms can better respond to the types of demand for their work and keep operating costs down. The fact that renovation encompasses a broad range of activities, the combination of which are often unique to each property, suggests that an industry comprised of many, small firms each capable of undertaking a variety of types of work may provide the most flexible and therefore efficient structure. A Saskatchewan government report suggests, in fact, that small, one-person renovation operations can compete successfully due to their reduced overhead expenses, their potential for greater flexibility and their self-reliant expertise.[1]

The relatively low average amount spent on renovation by consumers may be contributing to the proliferation of small firms. Evidence from the previously-referenced Saskatchewan study suggests that there may be a minimum size of profitable

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[1] Housing in Saskatchewan, Monthly Report, Saskatchewan Housing Corporation, September 1984.

job. Renovation firms experiencing financial problems may then be simply exhibiting poor business practices, taking on very small jobs where competitive pricing to cover normal overhead and profits cannot be applied.

Together, these structural and operating characteristics make it relatively easy for firms to participate in the renovation industry, or to minimize their losses and exit when there are economic downturns or greater gains to be made in other types of construction.

In Toronto, a study of renovator firms reports that they prefer to "stake out" a market area and work only in that location.[1] This operating strategy helps firms reduce transportation costs, maintain contacts with subtrades and suppliers, and stay in follow-up contact with clients. These operating characteristics also make financial sense given the localized, specialized and small dollar value of renovation jobs. As the Toronto study also observes, however, the personal preferences, management style and marketing ability of firm owners also are important in determining the number, size and mix of projects a firm undertakes.

The Residential Renovation Industry Survey is able to shed some light on the extent to which the capacity of the industry is fully utilized. Half of the firms did not recall having to refuse any work in 1984-1985, and only six per cent indicated that they had refused much or a lot of work. This suggests that there may exist some additional capacity within firms to respond to increased demand. However, the period 1984-1985 was one of relatively slow demand following the expiry of the Canada Home Renovation Plan (CHRP).

It is more difficult to market and target services in the renovation industry, given the participation of the consumer, the broad range of activities which comprise renovation work, and the low level of capitalization which characterizes firms' operations. In addition the marketing practices of these firms may reduce their ability to capture additional demand. Two organizational developments suggest a more formal approach to marketing among some firms: the appearance of franchising and realty companies which refer business to the industry.

Franchising marks an attempt by some entrepreneurs to obtain the best of two worlds. Individual firms can remain small, but, at the same time, can realize the benefits of belonging to a large organization. The phenomenon of the renovation franchise is not

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[1] Caskie, D.M., The Toronto Renovators..., a report prepared for the Program Evaluation Division, CMHC, June 1983.

currently widespread. Member firms pay an up-front fee and monthly dues. They benefit from a common company name, paid advertising and business training. Since their appearance, renovation franchises have tended to evolve from general types of work to offering a standard product or service, in order to remain financially viable. Some firms, for example, now specialize in home additions.

Concentration in the real estate industry, is another factor which may lead to greater organization within the renovation industry. The industry may be moving toward a more formal structure as a result of the prevalence of fewer and larger real estate firms. These larger organizations can influence the amount of work offered to renovation firms. Where repair work or improvements are required to units being sold, the ability of the realtor to recommend a reputable renovation firm to prospective buyers may help finalize the transaction. Ways to promote renovation services among national or province-wide realty companies include techniques to differentiate a product or service by adopting a "brand-name" (franchise), by specializing or standardizing.

Such organizational changes within the renovation industry provide evidence that the industry is maturing and adjusting and this may improve the survival rate of firms and encourage growth of the industry as a whole. In addition to structural problems, however, there are also financial and regulatory concerns relating to the industry's operating environment, which are discussed next.

b) Access to Financing

As shown in Table 4.16, three-quarters of the firms responding to the Residential Renovation Industry Survey used loan or line of credit financing. While half reported that this financing was easily obtained, about one-third indicated that they had experienced problems obtaining their financing. Although more new firms used loans or credit, financing was less easily obtained by new firms (less than 5 years) than old firms (more than 10 years), indicating that track record is an important consideration. Ease of access to financing appears to be more related to age of firm than to size of firm although small firms (1 and 2 person) were less likely to use loans or credit than large firms (more than 6 persons).

TABLE 4.16
USE AND EASE OF OBTAINING LOAN OR CREDIT FINANCING
BY SELECTED CHARACTERISTICS
1985 RENOVATION FIRMS

	USE OF LOAN OR CREDIT		ACCESS TO CREDIT/ LOAN EASY(1)	
	INCIDENCE (%)	(n)	INCIDENCE (%)	(n)
CANADA	73.2	698	48.0	335
REGION				
Atlantic	79.3	23	34.8	8
Quebec	74.6	159	54.1	86
Ontario	70.8	192	51.6	99
Prairie	77.1	192	43.7	84
British Columbia	68.7	132	43.9	58
TYPE OF RENOVATION FIRM				
Non-Specialist	71.2	225	50.2	113
Specialist (50%)	74.2	483	47.0	227
MARKET AREA SIZE				
Less than 10 000	72.4	144	50.0	72
10 000 to 99 999	74.0	251	50.0	127
100 000 and more	73.0	313	45.2	141
AGE OF FIRM (Years in Renovation)				
Less than 5	76.0	181	34.2	62
5 to 10	75.8	298	45.6	136
More than 10	68.9	213	62.9	134
NUMBER OF EMPLOYEES (full or part time)				
2 or less	59.3	123	49.6	61
3 to 5	71.0	264	44.3	117
6 to 10	82.6	200	52.0	104
More than 10	83.4	121	47.9	58

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

NOTE: 1. Ease of obtaining line of credit or loan to finance operations rated more than somewhat easy (4 or 5 on a 5-point scale from 1-Not at all easy to 5-Very easy).

Other sources confirm that renovation firms rely on cash flow, to a greater extent than debt financing. A recent study found that a high percentage of Toronto firms apply profits from previous projects to fund current jobs. Although 37 per cent of respondent firms perceive financing as one of their major difficulties, the author suggests that it is a problem of accumulating financial reserves associated with the instability in firms' workloads, rather than being a function of loan unavailability.[1]

While the Residential Renovation Industry Survey did not find significant differences in financing aspects for firms operating in rural, small urban or large urban areas, it is the more rural locations where a CMHC lenders' survey reported institutions being less able to provide service.[2] This situation would be no different from that faced by other types of rural borrowers, according to the lenders' survey. Lenders expressed some reluctance to offer mortgage loans for renovation being done on speculation, preferring instead to offer interim financing with a mortgage to be negotiated following the completion of the work. In the case of renovation-related mortgages, since the average loan size is usually low compared to new construction loans, the per dollar administrative cost is higher, increasing the cost to borrowers.

Finally, it may not be lending practices per se causing financing problems but the nature of the renovation business. Firms specializing in renovation are much more susceptible to the cyclical or seasonal swings in consumer demand, while those whose line of business is more diversified are better able to finance their work from non-renovation-related activities. The fact that newer, less established firms find financing more difficult to obtain may be more a reflection of the ease of entry to the industry and low level of capitalization required than any artificial restrictions on access to financing.

c) Government Regulations

As described in Chapter III, many aspects of renovation are covered by some form of government regulation. These affect property development, property operation and property sale. The cost of the work, both in time and dollars, and the rate of

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1 Caskie, D.M., The Toronto Renovators..., a report prepared for the Program Evaluation Division, CMHC, June 1983.

2 Clayton Research Associates Ltd. Survey of Lenders on the Financing of Home Improvements, A report prepared for the Program Evaluation Division, CMHC, March 1985.

return and profitability of a renovation investment are affected by the various forms of public sector intervention.

The most detailed evidence available on the nature and magnitude of regulatory impacts on the perceptions and operation of renovation firms comes from the Residential Renovation Industry Survey. It shows that firms perceive the impact of government regulations on operating costs as being less severe than has generally been believed. Although one-half of the firms surveyed felt that government regulations have a definite effect on their operating costs, no one type of regulation was identified by more than 30 per cent of firms (Table 4.17). The regulations which impacted the greatest proportion of firms are building codes and the permit and approvals process. These were also the only regulations which, on average, received ratings above the mid-point (some impact) of the rating scale. Contract laws and zoning bylaws had the least impact nationally.

TABLE 4.17
ASSESSMENT OF THE IMPACT OF GOVERNMENT REGULATIONS ON OPERATING COSTS

TYPE OF REGULATION	FIRMS RATING "DEFINITE TO BIG IMPACT"(1) INCIDENCE (%)	MEAN IMPACT RATING(2)	NUMBER OF CASES
Zoning Bylaws	13.7	2.2	742
Renovation Codes	19.1	2.5	843
Building Codes	26.1	2.7	853
Licensing Regulations	20.6	2.4	814
Permits, Approvals	27.3	2.7	853
Contract Laws	14.6	2.1	808

SOURCE: Residential Renovation Industry Survey, CMHC 1986.

NOTES: 1. Definite to Big Impact is a rating of 4 or 5 on a 5-point scale from 1-No Impact to 5-Big Impact.

2. Average rating on the 5-point scale.

The impact of regulations varied across several firm characteristics, and interestingly, did not vary across others. As might be expected, the impact was related to the level of government which is responsible for the administration of the

regulation. The findings by region and market size are shown in Table 4.18.

TABLE 4.18
INCIDENCE OF FIRMS IMPACTED BY REGULATIONS(1)
BY REGULATION TYPE AND FIRM CHARACTERISTICS

FIRM CHARACTERISTIC	INCIDENCE OF FIRMS IMPACTED BY THE REGULATION					
	ZONING (%)	RENO. CODES (%)	BUILDING CODES (%)	LICENS-ING (%)	PERMITS/ APPROVALS (%)	CONTRACT/ LAWS (%)
CANADA	13.7	19.1	26.1	20.6	27.3	14.6
REGION						
Atlantic	23.1	18.5	25.0	16.0	28.6	11.1
Quebec	10.3	27.1	32.1	37.1	35.2	26.1
Ontario	15.2	14.9	21.6	12.3	23.3	9.8
Prairies	15.8	17.6	26.0	19.6	24.5	13.7
British Columbia	10.0	19.6	26.1	16.6	28.6	10.8
MARKET AREA SIZE						
Less than 10 000	15.8	15.9	21.0	22.5	17.6	12.2
10 000 to 99 999	11.5	15.5	24.1	19.5	24.2	12.1
100 000 and more	14.5	23.3	29.8	20.7	33.8	17.6
Number of Cases	732	832	842	802	841	798

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

NOTE: 1. Impact is a rating of 4 or 5 on a 5-point scale 1-No Impact to 5-Big Impact.

Licensing and contract laws, which are generally under the authority of provincial consumer and commercial relations ministries, varied regionally. The highest proportion of firms impacted by licensing was in Quebec (37%) and the lowest in Ontario (12%). The same pattern was evident for the impact of contract laws, highest in Quebec (26%) and lowest in Ontario (10%).

The impact of building codes and the permit and approval process varied by market area size. Building codes, while under provincial jurisdiction through the building code, are administered by the municipalities who conduct inspections and issue maintenance and repair orders. In the largest market areas, where administration and enforcement may be more established, more firms were impacted (30%) compared to smaller markets (21%). Permits and approvals, a process which is directly controlled by the municipalities, varied accordingly by market area size. Twice as many firms (34%) in the largest areas were impacted as in the smallest areas (18%).

Interestingly, no relationship between the impact of regulations and the age or size of the firm or the degree of specialization in renovation was found. This suggests that the problems with regulations are more related to geographic location than firm characteristics and affect all firms, large and small, new and old, renovation and non-renovation. Firms may become larger or more experienced over time but they will still be similarly impacted by the regulations affecting the renovation process.

Final evidence concerning firms' perceptions about government regulations comes in the form of comments provided in reply to the industry survey's open-ended question. It asked firms to note anything they felt CMHC should be aware of to better understand the development and needs of the renovation industry. While the number of responses is too small to permit detailed analysis, a preliminary content analysis shows that, in addition to there being some concern about impacts of current regulations on operating costs,there was a need expressed for greater regulatory involvement to control new firms through licensing. These concerns were most typical among the more established firms and among Quebec renovation firms. Comments ranged from experiences about underbidding, price-cutting, poor quality workmanship and the poor image created by black market firms (cash transactions without receipts) to mention of fly-by-night firms that do not provide follow-up service.

Regulations then, are viewed as not being overly restrictive on the operation of the renovation market. This has both positive and negative implications for operating efficiency. It is positive in that costs are not adversely affected, except by building codes and the permit and approval process. It is negative in that firmer control may be required over entrants given the reported adverse impact of black market and fly-by-night firms on the financial viability and perceived public image of existing firms.

2. Quality of Renovation Work

Studies of the renovation industry have suggested that there is a problem with the quality of work done. From the National Housing Study, it is evident from property owners that there is less of a problem with quality of contracted renovation work than with the time taken to complete the work. In general, landlords report being less satisfied than homeowners. The purpose of this section is to examine the extent to which there may be a problem with the quality of renovation work, and to identify the conditions which are perpetuating the problem.

The major data sources for estimating the quality of renovation come from the Residential Renovation Industry Survey, the National Housing Study and the Canada Home Renovation Plan

(CHRP) evaluation. Firms were asked in the survey to comment on the adequacy of their management and planning skills. The National Housing Study asked property owners about their level of satisfaction with the last renovation job done in 1985 with hired labour. The CHRP evaluation included questions on the satisfaction of clients with the quality and timeliness of their contracted renovation work carried out under the program.

The Residential Renovation Industry Survey is the only survey which has obtained evidence about the adequacy of a firm's skills. Over 75 per cent of firms reported having above average cost estimating skills. Between 60 and 70 per cent of firms reported having above average skills in the following areas: negotiations with clients, planning workload, staff supervision and job scheduling. Less than fifty per cent of firms reported having above average skills in salesmanship. While most firms reported having above average business skills generally, planning workload and salesmanship were the two skill areas reported by fewest firms as being above average.

Poor planning may result in poor quality work if a firm attempts to undertake several jobs without allowing sufficient time to complete each adequately or if the appropriate mix of technical skills cannot be made available for each job. Good planning skills are also essential for longer term development of the firm. Given that subcontracting is a common practice among renovation firms, good planning skills are even more essential to ensure quality work.

As shown in Table 4.19, homeowners and landlords who undertook renovation work using renovation firms or with hired labour were generally satisfied. Satisfaction with the quality of materials used was the highest for both types of property owners. The ranking of workmanship was lower and timeliness had the lowest percentage of owners being relatively well satisfied. Landlords were, as a group, comparatively more critical of the timeliness of contracted work, than of the quality of workmanship or materials.

TABLE 4.19
SATISFACTION WITH CONTRACTED RENOVATION WORK
- HOMEOWNERS, LANDLORDS

	HOMEOWNERS		LANDLORDS	
	SATISFIED(1) (%)	MEAN RATING	SATISFIED(1) (%)	MEAN RATING
Workmanship	82.5	5.6	79.7	5.4
Materials	88.3	5.9	83.7	5.6
Timeliness	80.3	5.6	73.8	5.3
Number of Cases	2 327		372	

SOURCE: National Housing Study, CMHC, 1986.

NOTE: 1. Satisfied is a rating of 5, 6, or 7 on a 7-point scale from 1-Extremely dissatisfied to 7-Extremely satisfied.

Recent studies of the industry mention the difficulty in finding skilled labour as one of the most urgent problems facing firms. However, a study by CMHC on the characteristics of rehabilitation contractors in Nova Scotia attests that the quality of work is generally high.[1] This finding is attributed to the tendency of renovation firms to hire workers they know and take on fewer jobs such that labour shortages are less of a problem. Expanding too quickly may require hiring or subcontracting many workers whose track record is less well known thus risking lower quality work.

Another piece of evidence from the national industry survey concerns a content analysis of the open-ended question, referred to earlier, where respondents could describe issues of concern to them. Quality-of-work related comments were raised more by new firms. A closer examination of the types of comments made about work quality reveals that firms identify a lack of skilled labour as the major basis for problems which exist.

The use of written contracts and guarantees for renovation work is one indicator of the commitment of a firm to undertaking good quality work. Both the CMHC Nova Scotia and Residential Renovation Industry Surveys report that a majority of respondent firms stand behind their work in this manner, a trend which is

[1] A Study of the Residential Renovation Industry in Nova Scotia, Research Division, CMHC, 1987.

even more prevalent among firms specializing in renovation. Furthermore, over one-half of the Nova Scotia firms replying support the suggestion of a standard industry contract. The advantages of contracts and guarantees, as reported previously, are greater for new, less established firms. They represent a way of asserting credibility in an industry in which a firm's business is largely obtained by reputation and personal referral.

This discussion has shown that, although there is room for improvement, satisfaction with contracted renovation work is high. Opportunities for improvement include the upgrading of firms' business planning skills to ensure timeliness of work, the attraction of more skilled labour to the industry to ensure continued and consistent quality and the introduction of a standard industry contract for renovation work to minimize disagreement between contractor and client.

3. Level of Technical Knowledge

When firms within an industry possess an imperfect awareness about the most appropriate techniques or materials to employ, the market is constrained from producing to its fullest potential. The structure and operation of the renovation industry make it more difficult for firms to become fully and equally aware of the technical developments in the field. Information sources, to be most useful, should be in a form which can be disseminated and incorporated into the renovation production process relatively quickly, just as current information is required quickly in any business. Groups in both the industry and government are taking action to increase firms' awareness. To this end, there are several challenges which need to be addressed.

The extent to which renovation firms are aware of up-to-date methods and materials can be ascertained indirectly by examining their use of different information sources which communicate technical developments. It is important to note that of the nine sources of information detailed in the Residential Renovation Industry Survey, the three most frequently used by the renovation firms surveyed were those characterised by personal, face-to-face contact: building material suppliers, word-of-mouth, and clients (Table 4.20). These sources are likely the most frequently employed because they are free, readily available and represent direct, personal communication, so that the transfer of information is costless and fast.

TABLE 4.20
EXTENT OF RENOVATION FIRMS' USE OF INFORMATION(1) BY TYPE OF SOURCE

INFORMATION SOURCE	FIRMS USING INFORMATION (%)	PROPORTION OF USERS RATING SOURCE USEFUL(2) (%)	MEAN RATING(3)	N
Building Material Suppliers	95.2	59.5	3.7	896
Word-of-Mouth	93.0	55.2	3.6	876
Clients	86.2	27.6	2.8	795
Trade Publications	79.4	33.0	3.1	745
Trade Shows	74.6	34.7	3.1	695
Government Publications	67.6	12.5	2.2	626
Demonstration Projects	60.3	23.0	2.6	553
Seminars, Conferences	52.8	18.5	2.4	488
Training Courses	46.9	22.5	2.4	431

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

NOTES:
1. Use of information for finding out about new products, materials or techniques regarding renovation work.
2. Useful rating is 4 or 5 on 5-point scale from 1-Not at all useful to 5-Very useful.
3. Average rating on 5-point scale.

The fact that renovation firms display a preference for free, readily available information is logically related to the way the industry is organized and operates. With most firms not organized into associations, and given the large number of small firms which exist, it is difficult to transfer technical information quickly or uniformly throughout the renovation industry. Given the low level of capitalization required and the diverse nature of the work done, firms find it financially and administratively difficult to utilize more formal sources such as courses, seminars, conferences and demonstrations. This is reflected in the smaller percentage of firms who reported

attending such events. The CMHC Nova Scotia industry study cites low profit levels as another factor inhibiting firms from engaging in proper training.

Firms in the Atlantic region rated trade publications the highest among the five regions. Government publications were not highly regarded as useful information sources anywhere in the country, least of all in British Columbia. Training courses in Quebec were reported to be a more useful means of acquiring information than in any other part of Canada. The APCHQ, the provincial construction association, known to be very active in providing training courses, likely accounts for this preference among Quebec firms. Only the largest firms were favourable towards training courses, which take time and money to attend.

Firms also rated the usefulness of the information sources which they had used. Both building material suppliers and word-of-mouth, the two sources most frequently used, were also rated useful by the greatest proportion of the users (60% and 55% respectively). Several sources were found to be useful by less than one in four users including demonstrations (23%), training courses (22%), seminars/conferences (18%) and government publications (12%). This suggests that there is significant room for improvement in the utility of these sources.

C. SUMMARY

The outstanding need for repairs of the housing stock may be related to structural or operational problems in the renovation market. In this chapter, the demand and supply sides of the renovation market were examined and potential problem areas were investigated.

A number of potential problems were examined which may be influencing the renovation decisions of property owners. These included the extent to which the demand for renovation is affected by equity considerations such as income, and market efficiency issues such as financial constraints, government regulations, imperfect information, neighbourhood effects and employment status.

Next to "no renovation was needed", non-renovators most often cited the "high cost of the work" as their reason for not doing any work to their dwelling in 1985. This response would be indicative of an affordability problem for those households who were unable to afford the cost of the work. Where an outstanding repair requirement also existed, these households would be unable to access a minimum level of housing quality. The "high cost of the work" response could also be indicative of

the owner's lack of knowledge of the benefits of renovation or of a personal preference for other goods or services.

For homeowners, the data demonstrate a clear relationship between the need for repairs and household income. Homeowners with incomes below $30,000 were over-represented among dwellings in need of major repairs and under-represented among dwellings in need of only regular maintenance. Although it is difficult to accurately estimate the magnitude of the problem for tenants, renovation was found to have resulted in increased affordability problems and some tenant displacement. Tenants with the lowest incomes are likely to have experienced the greatest negative impacts.

Financing and government regulation do not appear to be major factors affecting the renovation decision of property owners. Less than five per cent of homeowners and ten per cent of landlords cited financial factors (interest rates, loan terms, loan refusal) as a reason why they did not renovate. Less than ten per cent of homeowners and landlords cited government red tape or fear of property tax increases. Nevertheless, the impact of these factors varied according to several owner, property and geographic characteristics. The impact was greater in rural areas and for homeowners as household income decreased.

The impact of the property owner's perception of the repair requirements of the dwelling was investigated. Both homeowners and landlords who underestimated the need for repair, when compared to the estimate provided by the building expert, were less likely to indicate that they planned renovation work in the next year. Even if these property owners act upon their expressed intention to undertake renovation work, an optimistic assumption, it is possible that they will do only improvements and additions and not address any outstanding repair requirements of the dwelling.

Several aspects of the renovation industry which may be affecting the supply of renovation services were examined to determine their impact on the activity of renovation firms. These included the structure and operation of the industry, access to financing, quality of work and level of technical knowledge.

Overall, the structure and operation of the renovation industry appear to be an appropriate response to the characteristics of the renovation market. By retaining only a few employees, subcontracting according to the requirements of each job and relying on customer financing, the typical renovation firm can better respond to the demand for its services while keeping operating costs down. These operating characteristics make it relatively easy for firms to participate in the industry.

Firms perceived the impact of government regulations on costs as being less severe then has been generally believed. Firms most frequently cited the impact of permits and approvals, building codes, licensing and renovation codes.

The impact of building codes and the permits and approvals process, varied by market area size. Twice as many firms were impacted in the largest market areas, where administration of these regulations is more complex, as in the smaller urban and rural markets. Licensing and contract law impacts, which fall under provincial jurisdiction, varied regionally. Quebec had the highest incidence of impacted firms, and Ontario had the lowest. Interestingly, no relationship was found between the impact of regulations and the size and age of firms. This suggests that the impact is more related to geographic location and that firms are still affected by regulations even though they may become larger or more experienced over time.

Compared to the quality of contracted renovation work, property owners were less satisfied with the time taken to complete the work. Good planning skills are essential to the successful operation and long term development of a firm and this was an area recognized by firms as needing improvement. Other opportunities for improvement include the attraction of more skilled labour to the industry to ensure continued and consistent quality and the introduction of a standard industry contract for renovation work to minimize disagreement between contractor and client.

Firms surveyed in the Residential Renovation Industry Survey reported most frequently using building material suppliers, word-of-mouth and clients as sources of information on renovation techniques and materials. These sources are likely used most because they are free, readily available and represent direct, personal communication. This is consistent with the relatively informal functioning of an industry composed of many small firms.

CHAPTER V
SUITABILITY OF RECENT PROGRAMS

Previous chapters have described renovation expenditures, repair requirements, the participants in the renovation market and the presence or absence of market problems. The influence of governments has been taken into account but only in terms of their regulatory and tax impact on renovation activity. The question of government programs and their influence on renovation has been set aside for consideration in this chapter. The chapter begins with a brief description of federal initiatives affecting renovation. The results of program evaluations and other analyses of recent programs are then summarized, focussing on the impacts and effects on renovation activity and the renovation market.[1]

A. FEDERAL PROGRAMS

CMHC has been involved in residential renovation since 1954 when the Home Improvement Loans Program was introduced (see Table 5.1). During the 1970's, renovation initiatives supported rehabilitation for low income households through the Residential Rehabilitation Assistance Program (RRAP). This initiative became fully targetted to households in core need as part of the Federal/Provincial Social Housing Programs in 1986. Rural renovation is assisted through two Rural and Native Housing Program (RNH) components; RRAP and the Emergency Repair Program (ERP). In the early 1980's, in an effort to stimulate employment in the residential construction industry, CMHC introduced the Canada Home Renovation Plan (CHRP). While designed for employment generation, CHRP resulted in over 250 million dollars of renovation expenditures during 1981 and 1982. CMHC, under Part V of the NHA, supports research, demonstration and dissemination of information on housing, including renovation.

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[1] The material presented in this chapter deals only with Federal renovation-related programs. It should be recognized, however, that both provinces and municipalities have been actively involved in the operation of their own renovation programs.

TABLE 5.1
CHRONOLOGY OF FEDERAL RENOVATION RELATED INITIATIVES

1938	National Housing Act (NHA) introduced.
1946	Canada Mortgage and Housing Corporation (CMHC) established.
1954	Home Improvement Loans Program (HIL) introduced.
1973	Residential Rehabilitation Assistance Program (RRAP) and Neighbourhood Improvement Program (NIP) introduced.
1974	Rural and Native Housing Program (RNH) introduced including RRAP and Emergency Repair Program (ERP).
1977	Canadian Home Insulation Program (CHIP) introduced by EMR.
1978	NIP terminated.
1980	Canada Oil Substitution Program (COSP) introduced by EMR.
1982	Canada Home Renovation Plan (CHRP) introduced.
1983	CHRP terminated.
1985	COSP terminated.
1986	RRAP becomes part of Social Housing package of programs.
	HIL terminated.
	CHIP terminated.
1987	NHA Mortgage Insurance coverage increased and extended to second mortgages and renovation

SOURCE: Program Evaluation Division, CMHC, 1987.

Other government agencies besides CMHC have introduced programs which, both directly and indirectly, have resulted in residential renovation. The Department of Energy, Mines and Resources introduced two programs in the late 1970's in support of the federal government's energy conservation policy. The Canadian Home Insulation Program (CHIP) and the Canada Oil Substitution Program (COSP) assisted with energy conservation renovations in residential dwellings. Environment Canada, through Parks Canada, encourages the preservation of heritage structures through their inclusion in a National Register of Historic Structures. Finally, non-profit foundations, such as

Heritage Canada and local heritage groups, provide support and encouragement for the incorporation of heritage work in renovation projects although only limited funding is available for such work from the three levels of government.

A short description of each of these programs, including program design and objectives, is presented in Appendix F.

B. PROGRAM EFFECTS

The extent of the need for repairs to the existing housing stock and of problems affecting the efficient operation of the renovation market have been documented in previous chapters of this report. In this section, the performance of recent CMHC initiatives in renovation will be assessed. This assessment is based on information and analyses obtained from CMHC program evaluation studies, research reports, program monitoring information, other government reports, as well as data from the National Housing Study and the Residential Renovation Industry Survey.

The assessment of program performance is organized under three broad roles for government in the area of residential renovation: the pursuit of social equity objectives including the provision of social housing assistance; economic market problems; and the pursuit of other government objectives such as employment generation or energy conservation.

1. Social Objectives

The contribution of programs to the achievement of social objectives is considered in terms of assistance provided and impacts on housing quality. First, the extent to which assistance has been directed to those with low incomes to improve their dwelling units is assessed. Next, the effects of program assistance on the quality of the dwelling units is examined. Evidence on these matters is available for two programs: RRAP and CHRP.

a) Provision of Assistance

Government assistance in renovation has been directed to households who do not occupy and are unable to obtain adequate, suitable and affordable accommodation. While most social housing initiatives have focussed on the provision of new units, RRAP has been directed at problems of dwelling adequacy. Specifically, RRAP has provided assistance to low-income property owners to improve substandard residential units. CHRP was also available to households with low and moderate incomes.

RRAP is the largest repair program offered by CMHC. It is a rehabilitation program which formally became part of the social housing package of assistance programs in 1986. The evaluation which was conducted of the pre-1986 program considered both the "rehabilitation" and the "assistance to residents" objectives. This evaluation revealed that the program was well targetted to low and moderate income homeowners. On all measures used (average income, poverty thresholds, gross debt service ratio, accumulated equity), RRAP recipients were found to be in greater need of assistance than the general population living in comparable dwellings in need of major repair. The program was less well targetted for rental units, but still, the tenants of RRAPed units were in greater need than tenants in the general population of dwellings in need of major repair.

For homeowners, the added burden of the program (ie. the repayable portion) was very small. The proportion of repair costs covered by the assistance increased, as income decreased, up to a maximum $5 000 forgivable loan. Roughly 60 per cent of homeowner recipients received fully forgivable loans. On average, the repayable loan added just slightly more than one per cent to the household's existing gross debt service ratio.

For tenants, the program was more likely to create additional financial burden. The program assistance was equal to one half of the cost of repairs or a maximum $3 500 per unit (increased from $2 500 per unit in 1982). The remaining repair costs were financed by the landlord through private lender loans or from their own resources. (Direct rental RRAP repayable loans were available up to 1979; but subsequently on a residual basis only.) In either case, the costs of the repayable portion could be recovered through rent increases in the rehabilitated units. These increases averaged 15 to 30 per cent immediately after RRAP often creating or exacerbating tenant affordability problems. This problem has been addressed in the 1986 Rental RRAP design by increasing the level of assistance and linking the maximum available assistance to the post-rehabilitation rent. The lower the rent, in relation to the average market rent for units of the same size in the same market area, the greater the available assistance. This reduces the frequency and size of post-rehabilitation rent increases for the lower rent units since the landlord must finance a smaller portion of the rehabilitation costs. For these very low rent units, any rent increase can have a great impact on tenant affordability.

The Canada Home Renovation Program also provided forgivable loan assistance to homeowners undertaking residential renovations. The amount of assistance was related to income, decreasing to zero for incomes over $48 000. In comparison with RRAP, the ability of CHRP to reach low and moderate income households was limited by the requirement for the homeowner to provide at least

two-thirds of the cost of the work, even at the lowest income levels. Nevertheless, the program predominantly served low to moderate income households. The proportion of low-income recipients of RRAP and CHRP is shown in Table 5.2.

Table 5.2
INCOME OF ASSISTED AND UNASSISTED HOMEOWNER HOUSEHOLDS

	GROSS HOUSEHOLD INCOME (1982)			AVERAGE INCOME (1982$)	NUMBER OF CASES
	LESS THAN $20 000 (%)	$20 000- $40 000 (%)	MORE THAN $40 000 (%)		
RRAP(1)	72.4	21.9	5.7	16 297	1 418
CHRP(2)	40.3	51.6	8.1	26 183	4 492
All Homeowner Renovators(3)	21.2	43.0	35.8	35 675	3 184
All Homeowner Households(4)	26.5	41.9	31.6	33 551	6 499

SOURCE: RRAP Homeowner Survey, CMHC, 1982, CHRP Client Survey, CMHC, 1985, FAMEX, Statistics Canada, 1982.

NOTES:
1. 1982 Incomes of clients of RRAP assisted in 1981.
2. 1984 Incomes of CHRP clients deflated to 1982.
3. All renovating homeowner households from FAMEX 1982.
4. All homeowner households from FAMEX 1982.

b) Housing Quality

Government involvement in renovation, regardless of the type or amount of assistance, is fundamentally directed toward the improvement of the quality of the dwellings. The basic social objective is to eliminate threats to the health and safety of the occupants. Indirectly, this would be expected to improve the quality of life for the occupants. The evaluations of RRAP and CHRP examined the achievement of the housing quality objectives (minimum quality standards, health and safety, extension of useful life) and the programs' overall impacts on dwelling condition.

As a rehabilitation program, RRAP assistance is intended to repair substandard elements of the dwelling to a minimum quality standard. The evaluation measured the existence after RRAP of substandard elements as defined by the RRAP Standards. Additionally, the quality of the repair work and the incidence of remaining threats to health and safety were also examined.

The evaluation revealed that RRAP was not entirely successful in improving substandard dwellings. Substandard items, included in the RRAP Standards, were still present in dwellings after RRAP. The majority of these substandard elements could be attributed to the absence of RRAP work rather than to poor quality work. However, the outstanding work was generally found to be minor in nature and did not create major health and safety hazards. For homeowner units, one half of the dwellings inspected had at least one outstanding item which was included in the RRAP Standards and was in substandard condition at the time of the evaluation inspection after the unit had been RRAPed. For rental units, the incidence was 42 per cent. The average estimated cost to repair these outstanding items was less than $650 per homeowner or rental unit at the time of inspection.

As noted, almost all of the substandard items were due to the absence of RRAP work to the item rather than to poor quality work. This incompleteness was more prevalent in homeowner units than in rental units. For homeowners, the incidence of incompleteness was greater among those with some repayable loan than among recipients of fully forgivable loans. There was no difference in the incidence of incompleteness between urban and rural areas. However, the incidence was significantly lower in Quebec where additional forgivable assistance through a provincial program was also available to RRAP recipients.

On the whole, the vast majority of repairs carried out under RRAP met acceptable quality standards of workmanship and materials. Some evidence of substandard work was found in 15 per cent of the units. This was primarily related to poor quality workmanship rather than to inappropriate materials. The incidence was greater in urban areas than in rural areas.

To determine if the housing quality improvements realized through RRAP were extending the useful life of the dwelling, the incidence of quality problems in recently RRAPed dwellings was compared to that in dwellings RRAPed in the first years of the program, up to six years earlier. While not indicative of a true test of time, there was no difference observed in the condition of the two groups of RRAPed dwellings.

CHRP was an employment creation program. Nevertheless, the renovation work which was carried out had an important impact on the existing housing stock. This renovation work was carried

out in the absence of specific program guidelines other than a requirement for contracted labour. The most common work areas were windows and doors (50%), roofing (46%), exterior wall surface (33%), exterior wall structure (30%), electricity (25%), kitchen (23%), interior floor surfaces (23%), interior wall surfaces (23%) and plumbing (21%).

Work undertaken with the CHRP grant was not concentrated on structures or systems which needed repairs or replacement. The evaluation found that a majority of recipients (71%) used the grant to improve components of the dwelling which were functional and only a minority (38%) undertook repairs to defective components.[1] For owners who rated their dwelling as being in need of major repair before CHRP, 42 per cent did not use the grant to undertake repairs to non-functional elements.

Yet, it is clear that CHRP played an important role in improving the housing quality of program recipients. Owners of 46 per cent of dwellings which received CHRP assistance responded two or three years later that their dwelling was in better condition than before the grant. Two thirds of the dwellings were rated in need of repair by their owners before CHRP (40% in need of major repair). After CHRP, only one third were rated in need of repair (14% major repair).

As the main initiative to address the repair needs of low-income households, RRAP does not completely address affordability or recurring adequacy problems. Low income homeowners who are unable to finance their share of renovation costs, or low income renters who are unable to afford higher post-RRAP rents, remain in need after the program even though the quality of their dwelling has been improved to minimum standards. Without the ability to carry out on-going maintenance and attend to future repair needs, the household is likely to return to a state of housing need in the future. This may result in the future loss of a housing unit which received assistance.

2. Market Efficiency

In Chapters III and IV of this report, the renovation market was described and evidence on the existence of market problems documented. This section considers the effect of recent federal initiatives on the availability of renovation financing, renovation activity and industry structure and on the availability of market and technical information for consumers and suppliers of renovation services.

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[1] Note that recipients often applied the CHRP grant to more than one dwelling component.

a) Financing

The availability of financing for renovation work no longer appears to be a problem for households without affordability problems.[1] Lenders are willing to provide financing using a number of different instruments. The level of uncertainty surrounding renovation financing, which was reflected in the strong take-up of HIL guarantees during the 1950's and early 60's, has diminished. Renovators, both assisted (CHRP) and unassisted (NHS) report that they primarily finance the work from savings or out of pocket.

Financing problems, while not extensive, are more important inhibitors of renovation activity for landlords than for homeowners. In the National Housing Survey, property owners who did not renovate but who identified a need for repairs were asked their reasons for not renovating. Forty-one per cent of homeowners identified the high cost of repairs yet less than 5 per cent cited financing problems (interest rates, loan terms or loan refusal). For landlords, cost of repairs was not as important while financing terms, still cited in less than 10 per cent of cases, were more important than for the homeowners.

Additional evidence of the absence of financing problems is the decline in take-up of HIL guarantees. This occurred at the same time that numerous financing alternatives for renovations were being introduced by private lenders, such as more easily obtainable consumer/personal loans, lines of credit, credit cards, etc. Also, large renovation projects often are undertaken at the time of mortgage refinancing which occurs more frequently since the introduction of shorter term instruments. The renovation costs and increased market value can be included in the calculations of the refinancing. Moreover, recently introduced NHA second mortgage insurance incorporating renovation costs will prove useful where favourable terms or closed instruments preclude refinancing an existing mortgage.

b) Renovation Industry Activity and Structure

The renovation industry is characterized as being highly diversified in terms of services provided, age of firms and their involvement in residential renovation. Some of the federal government renovation related initiatives have impacted directly or indirectly on activity levels and the structure of the industry. These have primarily occurred as a result of the

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[1] RRAP and other forms of social housing assistance are available for those who cannot afford the cost of repairs or alternative adequate accommodation, although demand exceeds supply.

generation of activity where the programs specify the use of contracted labour (CHRP) or approved contractors (CHIP) and the generation of additional private expenditures leveraged by the program designs requiring recipients to contribute a portion of the costs themselves (CHRP, COSP).

CHRP was very successful at leveraging additional dollars from the recipients of program assistance. The program was designed to ensure that the assistance covered a maximum of only 30 per cent of the cost of the work. The actual direct private renovation expenditure generated by a CHRP forgivable loan was $4 500 on average. This represents a private expenditure on renovation of three dollars for each program dollar. In addition to the direct program-related expenditures on the renovation work (labour and materials) many CHRP recipients also spent additional funds for appliances and other items not eligible for assistance and for professional services (design, legal, survey) related to undertaking the work.

RRAP, due to its low income target and social assistance objectives, does not attempt to generate significant additional expenditures from homeowner recipients. For the pre-1986 homeowner program, each forgivable loan represented over 80% of the total cost of the work. This generated only $0.25 for each dollar of program assistance. The pre-1986 rental program had a much larger leveraging effect as the forgivable loan was limited to a maximum 50 per cent of the cost of the repairs. This represented a requirement for the landlord to privately finance, on average $2.58 for each dollar of RRAP assistance. In many cases this resulted in sizable rent increases for the landlord to recover these costs. As a result, the 1986 Rental RRAP design increases the maximum available assistance while tying the proportion of the cost of repairs to the post-rehabilitation rent levels. This will result in less leveraging for the lower rent units, those where rent increases would have a proportionally greater impact.

The energy conservation initiatives of EMR also generated additional expenditure dollars. CHIP initially covered 100 per cent of the materials cost to $350 and 30 per cent of the labour cost to $150. However, many contractors arranged contracts with clients which required no additional payment from the homeowner beyond the grant. In 1983 the method of calculating the assistance was changed to 60 per cent of the total cost of materials and labour with the same maximum of $500. COSP, on the other hand, provided a maximum of 50 per cent of the costs of heating system conversion, thus requiring a minimum homeowner contribution of 50 per cent.

All of the direct subsidy renovation programs have experienced demand which has exceeded the supply of funds available. RRAP

expenditure budgets have always been fully committed. CHRP received several infusions of funds throughout the program period to accommodate demand. CHIP and COSP were terminated in part due to decreasing requirements for energy conservation as a result of falling oil prices.

The capacity of the industry to meet any additional demand which is stimulated or advanced due to a direct assistance program must be considered. While it is true that the renovation industry has very few barriers to entry, this makes the industry vulnerable to opportunistic entrepreneurs seeking only to capitalize on the availability of renovation subsidy dollars. Renovation contractors confirm that programs like CHRP play a major role in encouraging firms to enter the industry. Table 5.3 shows that a majority of contractors surveyed agreed that CHRP encouraged the creation of new firms and short-lived firms.

TABLE 5.3
EFFECT OF CHRP ON RENOVATION INDUSTRY

CHRP EFFECT	AGREE OR STRONGLY AGREE(1) (%)	AVERAGE RATING(2)	
		ALL FIRMS	FIRMS THAT USED CHRP
Helped Firms Stay in Business	42.0	3.2	3.5
Created Too Much Demand	22.7	2.6	2.6
Encouraged Creation of New Firms	57.9	3.6	3.8
Resulted in Short Lived Firms	61.6	3.7	3.8
Number of Cases	632	632	400

SOURCE: Residential Renovation Industry Survey, CMHC, 1986.

NOTES: 1. Rating of 4 or 5 on a 5-point scale where 1=Strongly Disagree and 5=Strongly Agree.

2. Average rating on the 5-point scale.

A corresponding decrease in consumer satisfaction with quality of workmanship can be seen from property owner surveys. Table 5.4 compares satisfaction levels for renovating property owners including CHRP recipients, RRAP recipients and the general

population (NHS respondents). While CHRP homeowners were less satisfied with the quality of workmanship than other homeowners, they were equally satisfied with the timeliness of the work.[1] This suggests that while firms were able to respond to the increased demand from CHRP in a timely manner, the increased number of new, inexperienced firms or the necessity to rush work to keep up with demand may have led to increased quality problems. Nevertheless, the level of satisfaction of CHRP clients regarding workmanship was still high, at 72 per cent.

TABLE 5.4
OWNER SATISFACTION WITH CONTRACTED RENOVATION WORK

	PER CENT OF OWNERS SATISFIED(1)				
	HOMEOWNERS			LANDLORDS(2)	
	NHS ALL (%)	RRAP RECIPS (%)	CHRP RECIPS (%)	NHS ALL (%)	RRAP RECIPS (%)
Quality of Workmanship	83	86	72	80	83
Quality of Materials	88	91	na(3)	84	91
Timing to Complete	80	86	79	74	79
Number of Cases	2 437	769	4 394	372	149

SOURCE: National Housing Study, CMHC, 1986 RRAP Homeowner and Landlord Surveys, CMHC, 1982 CHRP Client Survey, CMHC, 1985.

NOTES:
1. Satisfaction is rating of 5 to 7 on a 7 point scale where 1=Extremely Dissatisfied, 7=Extremely Satisfied.
2. CHRP not available to landlords.
3. Not asked in survey.

[1] It should be recognized that timeliness can be influenced by factors beyond the control of the contractor such as shortages of materials, labour disputes, bad weather conditions, changes requested by client, etc.

c) Information

Under Part V of the National Housing Act, CMHC undertakes, supports and disseminates the results of research related to housing. One area of research interest is the technical and market aspects of residential renovation. In the area of information and technology transfer, activities include builders' workshops for renovation contractors. As part of these information transfer activities, CMHC has produced and distributes a number of publications related to residential renovation. A list of some of the currently available titles is presented in Table 5.5.

TABLE 5.5
CMHC RENOVATION AND RELATED PUBLICATIONS
A SELECTED BIBLIOGRAPHY

GENERAL	
NHA 5186	Safety in the Home
NHA 1165	A Glossary of House-Building and Site-Development Terms
NHA 5011	Details of House Construction
NHA 5031M	Canadian Wood-Frame House Construction
RENOVATION	
NHA 5204	The Sensible Rehabilitation of Older Houses
NHA 5628	New Life for an Old House
NHA 5624	Home Care
NHA 5731	Inspection Checklist for Maintenance and Repair
NHA 5394	Protecting Your Home Against Burglary
NHA 5476	Landscape Architectural Design and Maintenance
NHA 5602	Site Improvement of Older Housing
NHA 5429	How to Hire a Contractor

SOURCE: CMHC Catalogue of Publications and Videos. 1987 (NHA 5880)

The provision of information and advice, along with program assistance, has been a common component of all CMHC renovation initiatives. Two main avenues have been pursued. On the demand side, information and advice is usually made available to property owners as part of the application and approval process for obtaining program assistance. On the supply side, information and training on new materials and construction techniques has been made available to renovation contractors.

Under RRAP, the delivery agent is required to provide counselling to applicants regarding the work which is required, how to finance any repayable portion, and ways for landlords to minimize inconvenience to tenants. The approval process requires an initial inspection of the property to identify necessary work, information on how to locate a contractor and obtain cost estimates and assistance in interpreting and selecting the contractor. The Standards for the Rehabilitation of Residential Buildings (the RRAP Standards), sample contracts, CMHC publications and advice are part of the non-financial assistance provided. Periodic inspections of the work in progress are carried out by program inspectors.

A less formalized process existed for CHRP. Recipients had access to information available at the local CMHC office but only limited controls were placed on the type of work which was eligible for assistance. However, a final inspection was carried out to ensure that the work had been done and that acceptable quality standards had been met. A CMHC publication, How to Hire a Contractor, was provided to all recipients.

Recipients of CHRP assistance who were surveyed as part of the evaluation of the program were asked if they recalled seeing the How to Hire a Contractor pamphlet. Just over half (56%) of the 4830 respondents recalled the pamphlet. They were also asked to rate the usefulness of the publication on a seven point scale. Over half of the respondents who recalled the pamphlet rated it as being more than somewhat useful (rating of 5, 6 or 7). Twenty nine per cent rated the pamphlet as very useful (rating of 7). The recipients who rated the pamphlet as more than somewhat useful were more satisfied with their contractors on measures of complete workmanship and inconvenience. The ratings by CHRP recipients of this particular publication were slightly better than ratings of the usefulness of all government publications by non-assisted respondents to the National Housing Survey. The higher rating is likely due to the fact that the CHRP recipients associated the assistance cheque with the pamphlet and were able to use the information immediately.

A major component of the energy conservation programs was consumer education through the provision of pamphlets, fact sheets, displays and telephone advice. The programs were,

not surprisingly, also heavily promoted by the energy conservation, insulation and heating industries.

3. Other Government Objectives - Employment Generation

When designed and implemented primarily for the purpose of generating employment, residential renovation programs have been successful at creating jobs in the short run. The analysis undertaken for the CHRP evaluation revealed that CHRP created some 6 000 jobs in the short term (1982-83) and 8 000 over a five year period (1982-86). The long term effect is larger than the short term because of the take-up pattern of the program and the relatively small negative effect of increased government borrowing to finance program expenditures.

The employment effect is spread over a number of sectors of the economy. This is due to the direct, indirect and induced expenditures stemming from the CHRP subsidy. For example, the subsidy leveraged additional private investment by the homeowner for the renovation work as well as direct expenditures for appliances, carpets and other fixtures which were not covered by the subsidy. Purchases by the construction and durable goods sectors from other manufacturing and commercial services sectors would then indirectly affect these sectors. Further increases in disposable income due to the direct and indirect expenditures would generate more purchases from manufacturing, commercial services and other sectors. The evaluation estimated that over half of the employment was generated within the commercial services sector and one fourth in the manufacturing sector. The construction industry ranked third with only 1 000 jobs generated by CHRP in the short or medium term.

C. SUMMARY

In this chapter, the performance of recent CMHC and federal government initiatives related to residential renovation has been examined. For the most part, the CMHC programs have been successful in achieving their objectives, be they rehabilitation of substandard dwellings for low income occupants or employment generation. The CMHC and other federal initiatives have also had an influence on the achievement of social objectives, market efficiency and other government objectives.

The Residential Rehabilitation Assistance Program (RRAP) is the major CMHC renovation-related initiative intended to achieve social objectives. An evaluation of the pre-1986 program concluded that the homeowner component was well targetted to low income households. The rental component was less well targetted and this was attributed, in part, to tenant displacement resulting from post-rehabilitation rent increases. In general,

the program was found to be reasonably effective at achieving its rehabilitation objectives, despite some outstanding work items after completion of the work, and to have improved the quality of the dwelling.

The Canada Home Renovation Plan (CHRP), used residential renovation as a vehicle for employment generation. While predominantly serving low to moderate income households, CHRP required them to provide a portion of the cost of the work from their own resources. Because of this leveraging effect, CHRP expenditures had a greater direct impact on the renovation industry than RRAP expenditures. Over the long term, CHRP created 8 000 jobs across many sectors of the economy. CHRP recipients also indicated that the overall quality of their dwelling had improved as a result of the work undertaken through CHRP.

It is evident that the considerable activity generated by the federal renovation related programs has encouraged the creation of new firms and, at least in the case of CHRP, short-lived firms. Furthermore, CHRP homeowners were less satisfied with the quality of workmanship than homeowners generally.

The survey evidence indicates that the availability of financing for renovation work is no longer a problem among consumers generally. For the most part, renovation work is financed by savings rather than loans. Moreover, numerous financing alternatives, including NHA insured second mortgages, are available where financing is required. Survey evidence for CHRP also indicates that information on contractors, provided to recipients was not fully utilized. Just over half the respondents recalled the information and, of these, over half found it somewhat useful.

The next chapter of this Renovation Overview will identify some of the implications for government and industry of existing problems in the renovation market.

CHAPTER VI
IMPLICATIONS

Previous chapters examined the operation of the renovation market, identified the presence or absence of market problems and the suitability of recent and current federal government programs in addressing them. Where identified market problems are not addressed by current government programs or addressed only partially, further action may be appropriate.

The implications of the study results for federal involvement in the renovation market are put forth here for both consumers and firms. They are presented as options, rather than recommended actions, in order to stimulate debate. A synopsis of each market problem is presented, followed by a discussion of suitable measures for addressing the concern. These include direct intervention by amending current programs, and indirect measures such as encouraging the improvement of regulatory practices, advocacy activities such as the sponsoring of renovation-related research, and the provision and dissemination of information.

There are a number of means which are available to the federal government for addressing these market problems - directly on its own, in co-operation with other levels of government, the not-for-profit sector, and in concert with industry and other private sector groups.

The remainder of this chapter is divided into two main sections. The first section presents consumer-related issues and options, while the second focuses on industry-related concerns and related remedial actions.

A. RENOVATION CONSUMERS

Market problems affecting housing owners and occupants fall into two major categories:

- unequal access to minimum standard housing for low income households; and
- consumer perceptions and preferences inhibiting the undertaking of required repairs.

1. Unequal Access to Minimum Standard Housing

Low Income Homeowners

The analysis presented in Chapter IV indicates that low incomes restrict the renovation of the housing stock in greatest need of repair. Homeowners with annual incomes of less than $20 000 had the highest incidence of occupying dwellings in need of major repair in 1986 while exhibiting the lowest propensity to plan renovations for 1987. Those low income homeowners citing intentions to renovate in 1987 reported lower planned expenditures than middle and upper income households, despite the higher repair requirements of the dwellings which they occupy.

CMHC provides assistance to lower income homeowners for the repair of substandard dwellings through the Residential Rehabilitation Assistance Program (RRAP). As a component of the federal/provincial social housing policy, introduced in 1985, RRAP is now targetted to households in core need.[1] Eligible homeowners may receive loans of up to $10 000 in urban areas and $25 000 in rural areas to bring their dwellings up to minimum health and safety standards. Depending on the household's income and location, a portion of the loan amount may not have to be repaid. This forgivable portion can be up to $5 000 in southern Canada, $6 250 in the near North and $8 250 in the far North (see Chapter V).

Alternatives

The current Homeowner RRAP represents a well targetted response to the repair requirements of low income homeowners. Changes to RRAP are, however, currently under review by CMHC as part of a formal consultation process. A variety of prospective modifications have been presented for consideration in A Consultation Paper on Renovation, which was released in July 1987. Options currently under consideration address ongoing repair needs and induced affordability problems, in addition to existing adequacy problems. They include, but are not limited to, the following:

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[1] Households in core need have a housing affordability, adequacy or suitability problem and are unable to obtain adequate and suitable accommodation in their local market without paying more than 30 per cent of their household income. This is measured by core need income thresholds for household size and market area.

- Provide loans to cover the full cost of renovation, registering loans on the property title (allowing for subsequent recapture on resale). This would ensure that the full extent of repair requirements are addressed without inducing affordability problems for households capable of making some repayment.

- Relate loan forgiveness levels to the actual cost of required repairs. This would improve the equity of RRAP and ensure that high costs do not prevent the worst stock from receiving the attention it requires.

- Relate loan forgiveness levels to affordability criteria (shelter costs as a proportion of household income). This would improve program equity and limit induced affordability problems.

- Allow for repeat assistance. This would ensure that units renovated with RRAP funds don't fall into disrepair as a result of poor maintenance and repair practices related to inadequate incomes.

- Incorporate consideration of household wealth (non-income producing assets) within the RRAP eligibility and assistance criteria. Savings achieved as a result of better targetting would allow for the provision of deeper assistance where warranted or extension of assistance to a larger number of eligible homeowners.

The National Housing Study provides data which can be used to assess two areas included in the consultation process: eligibility and available forgiveness amount.

- Eligibility

Nationally, 29.4 per cent of homeowner households occupying dwellings in need of major repair had incomes below their respective core need income threshold, and hence were eligible for RRAP.[1] Table 6.1 shows that eligibility for RRAP ranged from a high of 49.5 per cent of dwellings in need of major repair in Atlantic Canada, to a low of 17.5 per cent in Ontario. The incidence of eligible households in rural areas (41.5%) is roughly double that recorded in urban areas (21.3%).

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[1] Eligibility may be underestimated because households in rural areas which experienced crowding have not been identified and occupants have a tendency to underestimate the need for repair.

TABLE 6.1
REPAIR NEED AND ELIGIBILITY
FOR HOMEOWNER RRAP ASSISTANCE

	ALL HOUSEHOLDS IN NEED OF MAJOR REPAIRS		HOUSEHOLDS IN NEED OF MAJOR REPAIRS ELIGIBLE FOR RRAP
	(n)	(%)	(%)
ALL	703	8.5	29.4
TYPE			
Urban	336	7.1	21.3
Rural	367	12.3	41.5
REGION			
Atlantic	277	14.6	49.5
Quebec	90	7.1	28.9
Ontario	97	8.2	17.5
Prairies	148	8.2	36.6
B.C.	91	7.7	24.2

SOURCE: National Housing Study, CMHC 1986.

Clearly, under current program guidelines, a large proportion of the households living in dwellings in need of major repair are eligible for the homeowner component of RRAP. Looked at another way, however, 70 per cent of the dwellings in need of major repair are occupied by non-core need households and thus are beyond the scope of RRAP.

o Available Forgiveness Amount

Financial assistance under RRAP (through the forgivable portion of the loan) is not currently related to the costs of the repairs required to rectify the substandard condition. However, partcipating households are required to undertake all repairs required to meet the RRAP Standards. The application of the ceiling on loan forgiveness may disqualify or create affordability problems for households with the lowest incomes or highest repair costs who cannot obtain the additional funds from personal resources or private lenders. As noted, households with adjusted incomes of less than $13 000 are eligible for a forgivable loan up to $5 000 in southern Canada, $6 250 in the near North and $8 250 in the far North. The amount of loan forgiveness declines for households with adjusted incomes above $13 000 to the point where, at $23 000, no forgiveness is available. Some households, therefore, are eligible for the program but would not receive any forgiveable loan amount because their household income, while below the applicable core need income threshold, is above the upper limit for

forgiveness. This occurs for large households (7-10 persons) in areas of high housing costs where the core need income thresholds exceed $23 000.

All of the households from the National Housing Study sample who were eligible for RRAP loans (those occupying dwellings in need of major repair and having incomes less than the core need income threshold), were eligible for at least some loan forgiveness. As shown in Table 6.2, half of the dwellings were estimated to require repairs costing more than $5 000, the maximum forgivable loan amount for most of the country. In fact, over one quarter of all dwellings required repairs greater than $10 000. For all of these dwellings, RRAP forgiveness alone would not be sufficient to undertake all of the required repairs. RRAP administrative data reveals that the average cost of work done by program clients, in 1986, was $6 672. This figure is close to the average repair requirement of $7 823 for dwellings in the National Housing Study rated by the experts as needing major repairs. The shortfall is much greater in rural areas, as the average repair cost estimate for rural dwellings in need of major repair was $9 503.

TABLE 6.2
DISTRIBUTION OF REPAIR COST AND FORGIVENESS ESTIMATES
HOMEOWNER HOUSEHOLDS ELIGILE FOR RRAP(1)

AMOUNT	AMOUNT OF REPAIRS(2)		MAXIMUM AVAILABLE FORGIVENESS(3)	
	DISTRI-BUTION %	CUMULA-TIVE %	DISTRI-BUTION %	CUMULA-TIVE %
$0	4.4	4.4	0.0	0.0
$1 - $999	2.5	6.9	0.0	0.0
$1 000 - $1 999	7.1	14.0	1.5	1.5
$2 000 - $2 999	8.3	22.3	2.0	3.5
$3 000 - $3 999	8.4	30.7	1.6	5.1
$4 000 - $4 999	9.8	40.5	12.0	17.1
$5 000 - $5 999	10.5	51.0	69.6	86.7
$6 000 - $6 999	2.4	53.4	12.7	99.4
$7 000 - $7 999	3.2	56.6	0.0	99.4
$8 000 - $8 999	3.6	60.2	0.6	100.0
$9 000 - $9 999	3.2	63.4	0.0	100.0
$10 000 and more	36.5	99.9	0.0	100.0
Number of Cases	105		214	

SOURCE: National Housing Study, CMHC, 1986

NOTES:
1. Homeowner households with income below the Core Need Income Threshold, living in dwellings in need of major repair.
2. Repair cost estimates from CMHC building expert sub-sample.
3. RRAP forgiveness estimates from National Housing Study homeowner respondents.

The provision of financial subsidies provides an incentive for the rehabilitation of those dwellings in need of major repair occupied by households in core housing need. However, based on the analysis of repair costs for dwellings in the National Housing Study, the success of RRAP will depend on the ability and willingness of RRAP recipients to take on non-forgivable loans or provide equity. This is particularly the case in rural areas.

About half of the dwellings in the National Housing Study in need of major repairs have no mortgage outstanding. Among dwellings in need of major repairs occupied by households with incomes of under $20 000, two-thirds are mortgage-free.

Although this latter group may lack the disposable income to pay for required repair work, equity built up in the home may provide a suitable base from which to finance renovations, if appropriate financing instruments were available. To this end, research could be undertaken to ascertain whether this group would be willing to draw upon their equity in order to undertake needed repairs.

Low Income Renters

Data obtained from the National Housing Study suggest that rented dwellings are in generally poorer condition than owner occupied dwellings. The majority of tenants themselves do not undertake renovations because it is not within their responsibility or authority. As a result of their lack of direct involvement in investment decisions affecting their dwellings, the renovation process can create considerably more problems for renters than is the case for homeowners. The most common problems which stem from rental renovation activity are displacement and induced affordability problems.

Financial assistance for the repair of substandard rental properties is currently provided by the rental component of RRAP. The revised (1986) Rental RRAP contains greater financial assistance than was previously available (up to $17 000 per self-contained unit and $8 500 per hostel bed). This design attempts to limit RRAP-induced affordability problems for tenants by linking the level of loan assistance to estimated post-rehabilitation rents. Landlords are also required to enter into a 15 year rental agreement with CMHC which specifies maximum rent levels.

Rental RRAP assistance is not directly targetted according to the presence of households in core need. The level of loan forgiveness is determined by the relationship between post-rehabilitation rents and average market rents for similar units, without consideration of tenant incomes.

Alternatives

A number of alternative modifications to Rental RRAP have been outlined in A Consultation Paper on Renovation including, but not limited to, the following:

- Relate the level of loan forgiveness to the number of tenants in core need and control the rents on core need units.

- Incorporate tenant selection criteria within the rental agreement to ensure that those units in receipt of

subsidies would continue to be occupied by households in core need.

- o Examine alternative means of protecting tenants in core need from experiencing induced affordability problems (e.g. use of rent supplements).

- o Relate the length of the rental agreement to the amount of loan forgiveness provided.

Rental RRAP has been designed to respond to the problems of tenant displacement and induced affordability problems which often accompany renovation initiatives. The effectiveness of the indirect targetting approach of Rental RRAP, is, however, not clear since data on the tenants occupying rental properties receiving Rental RRAP are not available. In order to assess the effectiveness of the indirect targetting approach, therefore, a survey of the characteristics of tenants of Rental RRAP properties should be carried out.

2. Consumer Perceptions and Preferences Inhibiting the Undertaking of Required Repairs

Homeowners not renovating in 1985 and identifying a repair requirement cited "cost" as the single most important reason for their decision. Not surprisingly, low income households were most likely to cite the influence of cost. RRAP, as discussed above, has been designed to address the affordability problems of these low-income households. However, over half of the households citing this reason had incomes over $20 000 and almost one quarter had incomes over $40 000.

In the face of recognized repair requirements, these households are likely expressing a perception that the cost of the work exceeds the benefits to be realized or a lesser preference for housing quality compared to some other item. They may perceive that the expenditure will not provide sufficient benefits, either through increased market value, decreased operating or maintenance costs or increased enjoyment or satisfaction with the dwelling. Alternately, they may simply be expressing a preference for something other than home renovations, or a desire to move in the near future, even if this means continuing to live in a dwelling in need of repairs.

Comparison of the dwelling condition ratings provided by property owners and occupants with those provided by building experts for the same dwelling unit provides evidence that many property owners and occupants fail to fully recognize the repair requirements of their dwellings. About 40 per cent of owner/occupants (and 50% of landlords) incorrectly classified the need for repair status of their dwelling. Underestimation of repair

requirements was more prevalent than overestimation, and was particularly pronounced among dwellings in the poorest condition (assessed by the experts to require major repairs). As many as 64 per cent of homeowners and 86 per cent of landlords failed to recognize that their dwellings were in need of major repair. Inaccurate perceptions of repair needs may pose a serious impediment to the repair of the housing stock, insofar as those who underestimate the need for repairs manifest a lower propensity to plan renovations or repairs in the future.

CMHC has traditionally attempted to educate housing consumers about housing quality issues and appropriate maintenance and repair practices through its research and information activities. The principal medium through which this has been achieved in the past has been the preparation and distribution of research reports, advisory documents and general interest publications.

Alternatives

While the results of the National Housing Study pertain to information sources in general, it appears that there is room for improvement in the usefulness of information currently available to aid property owners in identifying repair requirements, in recognizing the benefits of repair and maintenance actions and in choosing appropriate solutions. A range of possible actions are outlined below which illustrate the kinds of actions necessary to address this particular market problem:

- Evaluate the usefulness of existing home maintenance and repair publications and distribution practices.

- Conduct a survey of households and landlords to determine the key information requirements necessary for effective maintenance and repair behaviour.

- Examine alternative means of making information available to residential property owners (publications, seminars, videos, pamphlets, etc.) especially given their propensity to acquire information through informal as opposed to formal channels.

- Re-investigate the feasibility of providing existing housing stock inspections on a fee-for-service basis, or supporting the provision of such services by the private sector.

- Support research to provide documentation on the benefits accruing from renovation (e.g. reduced operating costs,

reduction of health and safety hazards, higher resale values etc).

- o Provide information to homeowners and landlords to aid them in setting renovation priorities. Concentrating on a smaller number of key repair jobs will reduce the total cost of renovation projects in any given year and ensure that the most important problems receive attention.

- o Conduct research and distribute information on the price range of common repair projects and on methods of cost estimation to aid prospective renovators in preparing realistic budgets for renovation projects.

- o Encourage municipal governments to educate the public concerning the nature and importance of local maintenance and occupancy regulations.

Clearly the consumer is a key component of the renovation market and attempts to educate and improve their knowledge of repair requirements and renovation practices will ultimately lead to a more informed and efficient marketplace.

B. RENOVATION FIRMS

There are three categories of problems affecting the operation and development of the renovation industry which suggest the need for action by government directly or by government in concert with industry and consumer groups. These are:

- o operating cost impacts of government regulations;

- o inadequate technical information;

- o weak business skills.

1. Cost Impact of Government Regulations

Options related to amending regulations or the regulatory process are, for the most part, beyond the legal mandate of CMHC, as described in Chapter III. Land use regulations, such as zoning, building permits and building codes are under the jurisdiction of provincial governments. CMHC may promote regulatory change, however, by participating with other federal agencies and levels of government in the development of model legislation and the sponsoring of renovation-related research.

Evidence from the Residential Renovation Industry Survey showed that regulatory impacts were less of a concern to firms overall than had been anticipated. It was thought that a greater

percentage of firms undertaking renovation of a major nature, such as conversions, and who require municipal approval for the work, would have cited regulations as an operating concern. Less than 30 per cent of respondent firms rated any type of government regulation as having a significant cost impact on their renovation operation. Although the percentage of renovation firms assessing regulations as having a definite to big impact on operating costs was small, those identifying regulations as a problem for the most part agreed on those of most concern. Building codes and the development approval process were the regulations identified as having a definite to big operating cost impact.

The Corporation is a strong contributor to the research efforts of private interest groups, the building industry and other levels of government. In the area of regulation, participation by CMHC follows an agreement established with the provinces in 1985 to "...co-operatively re-examine the question of regulatory reform with a view to reducing housing costs." In recognition of that agreement, CMHC is funding a joint study on regulatory reform with the Canadian Home Builders' Association (CHBA), the Canadian Association of Housing and Renewal Officials (CAHRO) and the Federation of Canadian Municipalities (FCM). There have been three major initiatives proposed as a result of the tripartite agreement.

The first proposal is the undertaking of demonstration projects with seed money provided by CMHC, and managed by the tripartite organization. Eligible projects include new construction as well as major addition or conversion work on existing buildings. The aim is to show what technical, planning or design solutions can be achieved by modifying existing regulations.

The second proposal is the formulation of three prototype development approval systems, one suitable for large, one for medium and one for small municipalities. By producing models, including regulatory instruments, computer models and management techniques, the tripartite association aims to prompt municipalities which may not have the resources to introduce more streamlined, rational processes. At the same time, some uniformity in development regulations would be encouraged among local jurisdictions.

The third initiative is the provision of support to a project which has already captured the interest of several provinces and which is central to the regulatory reform project: the refinement of existing work on a model renovation code. The main actors would be the National Research Council (NRC), and the provinces of Ontario and Alberta. Current renovation codes merely specify alternatives to the National Building Code, and

have been found to be too inflexible for cost-effectively regulating major conversion work.

Alternatives

Research under the CMHC/CHBA/FCM tripartite agreement represents an appropriate response to remedy the renovation-related regulatory concerns expressed by the industry in this study. The regulatory reform study is relevant in that it focuses on the two categories of regulations with the greatest impact on firms' operating costs: building codes and the development approval process. It is intended to develop model legislation and building techniques which can be readily adapted by local jurisdictions.

2. Inadequate Technical Information

Although 67 per cent of renovation firms report referring to government publications and available written material as sources of technical information, their value is ranked exceedingly low compared to other more informal means, such as word-of-mouth or material suppliers. These preferences are consistent regardless of firm size or concentration in renovation.[1]

When technical information is acquired by informal means, a number of problems may result. There is the risk of poor quality work if the construction methods are incorrect. Design solutions may be less than optimal resulting in higher costs if the firm or the do-it-yourself renovator is not adequately familiar with the options available. Given that many renovation activities are undertaken by property owners themselves, it is also important that technical information be made available to these do-it-yourselfers.

CMHC is currently involved in providing technical information to those carrying out renovation work in a variety of ways. As outlined in Chapter V, the Corporation sponsors builders' workshops for renovation contractors, and produces and distributes a number of publications related to residential renovation. The Corporation also conducts the field testing of designs, methods of construction and materials to address a range of technical problems such as air quality and moisture.

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[1] There is one significant difference: for younger firms. More than 27 per cent of firms which entered the renovation industry within the last five years demonstrate a marked preference for formal training compared to less than 22 per cent of more established firms.

The Corporation is studying technical innovation in the housing industry to document the process of the formulation, development and integration of new building ideas. Work is planned to develop methods for encouraging, capturing, and transferring new building ideas with the objective of improving work quality and the efficiency of building methods.

In addition to CMHC survey evidence, the Corporation is aware from discussions with members of the renovation industry that its publications and training courses require revision. Published material has been overly technical in its presentation and therefore difficult for firms to apply. Training courses have been described as being too long in duration, and as being taught by people more familiar with engineering principles than having practical experience in renovating.

In response to these comments, the Corporation aims to provide the results of current and future research in a less technical, easy to understand format appropriate for assisting renovators to solve common construction problems. Speakers with strong technical backgrounds experienced in renovation are to be employed in training sessions. Special workshops are being developed for the consumer.

Alternatives

Current initiatives aimed at improving the content and format of Corporation publications and workshops represent an appropriate response to some of the evidence presented in this study. These initiatives, however, represent formal modes of communication when in fact informal modes of communication are most used and most valued by the industry. In addition to current activities, therefore, strengthening the cost-effective transfer of good technical information through "informal" type channels represents another way of alleviating this market problem.

The Corporation could, for example, support the production of videos and/or a series of evening information sessions which illustrate practical approaches to solving technical renovation problems. Information videos/seminars could be produced in conjunction with related industry groups including material suppliers and manufacturers as well as local development officials. The advantages of offering information in these forms to renovation firms and do-it-yourself renovators is that they represent ways to disseminate technical information quickly and accurately. Evening seminars occur at a time more convenient for working people, and in an environment which offers the efficiency of a one-stop shopping approach to problem-solving, compared to the distribution of published material alone. Videos, which can be viewed at the viewer's convenience, represent a low cost method of providing advice and

demonstrating techniques. The distribution of technical information pamphlets at material suppliers or other retail outlets is another route worthy of consideration.

3. Weak Business Skills

Surveys of both consumers and the renovation industry indicate that firms tend to produce good quality work, using appropriate materials, but at the expense of timeliness. The problem is corroborated by the finding that a majority of the renovation firms surveyed assessed their skills in planning work and in managing their employees as being at or below average.

The majority of homeowners and landlords responding to the National Housing Study who hired firms or workers to do renovation in 1985 were more than just satisfied that the work was done on time. But a large minority, over 20 per cent of homeowners and over 26 per cent of landlords, were less than satisfied. The CHRP Evaluation also found that about 20 per cent of assisted homeowners were less than satisfied with the timeliness of the work.

When asked to rate their ability in a number of business planning and personnel management responsibility areas, over 75 per cent of renovation firms assessed their skill in cost estimating as better than average. However, the percentage of firms rating their skill as better than average was lower in the other planning and management areas. Percentages ranged from 47 to 68 per cent of firms in areas of salesmanship, planning workloads, negotiating with clients, scheduling jobs and supervising staff.

Low profit margins which restrict funds and access to training are cited in the CMHC Nova Scotia Renovation Industry Survey as a major reason for the weakness in business skills. The private sponsorship of business training within the industry has generally been only undertaken by the larger franchise companies, and groups such as the Quebec Homebuilders' Association, as reported in Chapter III. Efforts are underway within the CHBA organisation to establish training and education programs to enhance firms' business skills. The CHBA provincial Renovator Councils are to be used to coordinate the development and delivery of the programs as a way of promoting professionalism in renovation. Courses are also offered by some community colleges.

CMHC, along with CHBA and Energy, Mines and Resources Canada (EMR), are partners in a pilot series of Renovators' Seminars, commencing in March 1988. This training effort represents one component of CMHC's support strategy. The Renovators' Seminars consist of three modules that concentrate on improving business

skills: cost estimating, client relations and house inspections. The information is to be disseminated via slide presentations, videos and technical handouts in single day sessions.

Alternatives

Business training courses are becoming more widely available to the industry, but it is often difficult for small firms to find out about and take advantage of them. Educating the consumer about hiring and working with renovation firms may represent a complementary way for CMHC to improve the timeliness of renovation work. To this end, there are several ways CMHC may implement this approach.

- Educate the consumer on the merits of planning and scheduling renovation work and encourage consumers to undertake projects in the traditionally slower months of the year, from November to April.

To the extent that property owners contract out renovation work as the need arises, rather than by planning in advance, they may be setting unrealistic deadlines, thus contributing to the difficulty of some firms completing jobs in the time required. Approaching a firm well in advance of when the work is required allows the firm to advise the consumer on a realistic work schedule. It may also assist firms in managing their work more efficiently by enabling them to plan hiring and order materials ahead.

Firms report that their busiest months range from April to November. If consumers were to schedule some of the internal renovation work they want contracted out in the winter months, firms would be better able to focus their resources on individual jobs, improving their ability to finish the work on time.

- Educate consumers about the time requirements for typical types of renovation projects so that expectations are realistic when contracting out work.

The problem of renovation work being completed late is compounded if consumers are unfamiliar with the length of time required for the work, or are unaware that there are legitimate reasons for delays, such as late delivery of material supplies.

- Inform consumers about the characteristics of reputable contractors.

Consumers should be encouraged to retain reputable contractors - those with a favourable credit rating who have sufficient

financial resources such that significant upfront payments are not required, and who have demonstrated the ability to complete similar types of renovation work on time and to the clients' satisfaction. The practice of hiring a firm solely on the basis of a low price carries the risk that the firm is not operating in a professional manner and may leave the consumer vulnerable to such problems as delays in work. CMHC has commenced the revision of its pamphlet, "How to Hire a Contractor", as one means of achieving this.

If a firm does not have a credit rating and/or requires a large initial payment in advance of the work, there is the chance that the contractor is paying for materials and labour expenses incurred on previous jobs. Any delays in the completion of a project or in the payment from other clients could result in delays or the possible non-completion of current work.

Firms which do not offer the names of previous clients on request or whose former clients would not recommend the firm for future work are unlikely to be reliable. If clients who have had work done within the previous year have not been revisited by the firm to check for recurring problems, any guarantee offered by the firm may not be reliable.

Firms which work on a part-time basis, without a business office or staff on salary or require payment in cash have lower overhead expenses such as income taxes, compared to those for whom renovation is a full-time professional occupation. All of these factors point to characteristics of potentially less reputable firms which have less of a business stake in their work and less of a commitment to the consumer.

Improving the awareness of consumers about how to select a renovation firm would improve the quality and timeliness of the work, and it would directly assist the industry in increasing the level of professionalism among its members.

CHAPTER VII
SUMMARY AND CONCLUSIONS

CMHC has a mandate, under the National Housing Act, to promote and encourage the repair and modernization of existing housing. The Corporation has been an active participant in the residential renovation market for many years. CMHC involvement has included the provision of loans for home improvement activities. Costs have been subsidized for owners undertaking repairs and improvements to repair substandard dwellings for low and moderate income occupants or to generate employment in the residential construction industry. CMHC has provided support for research, demonstrations and information dissemination on technical, economic and social aspects of residential renovation.

The Residential Renovation Overview study has been undertaken to provide new information on residential renovation in Canada as a basis for assessing whether problems currently exist in the residential renovation market and, if so, to isolate areas where government action may be appropriate. As part of the study, new data was collected on the dwelling condition, renovation activity and attitudes towards renovation of Canadian homeowners and landlords and on the activity and perceptions of Canadian renovation contractors. This data has permitted, for the first time, a detailed statistical description of the residential renovation industry and the analysis of market problems for consumers and suppliers of renovation services.

Conclusions on each aspect of the overview study are presented below.

A. REPAIR NEED

Residential renovation has grown in importance as a component of residential construction activity in Canada.

Total spending on residential renovation in Canada has increased dramatically in recent years primarily due to increases in home improvement work. For most of the 1980s, renovation expenditures have exceeded spending on new construction. Expenditures on renovation, including materials and contracted labour grew from $1.7B in 1971 to $13.3B in 1986. The additional value of do-it-yourself labour is estimated to increase the 1986 amount by up to $3B.

Renovation of a substandard property is often preferable to demolition and replacement.

Evidence of the attractiveness of renovation investments is provided by a case study comparing renovation and replacement options for a selection of substandard dwellings in four municipalities across Canada. The study revealed that, under reasonable investment assumptions, renovation produces a greater net cash flow compared to replacement. Only at very low discount rates does the replacement option become more favourable.

Recent estimates of dwelling condition indicate that there is still a significant proportion of Canadian dwellings in need of repair.

Estimates of dwelling repair need in the low-rise stock from the National Housing Study reveal 10 per cent of dwellings in need of major repair and an additional 25 per cent of dwellings in need of minor repair. This estimate of need for major repair falls between those from the 1981 Census (7%) and the 1982 and 1985 surveys of Household Income, Facilities and Equipment (13%).

The majority of owner occupied dwellings with at least one substandard element required repairs costing less than $2 000.

The costs of repairing substandard elements in low-rise buildings were estimated by building experts. For owner occupied dwellings, the average cost was $3 396, the median cost was $1 600. For dwellings in need of major repair only, the average cost estimate increased to $7 823, the median to $5 175. On average, higher expenditures were required for dwellings in rural areas ($4 992), in Atlantic Canada ($4 261) and for dwellings built before 1901 ($7 713). One fourth of the dwellings with substandard elements required repairs costing less than $500 and 60 per cent required repairs costing less than $2 000. However, about 9 per cent of the low-rise stock required expenditures of $10 000 or more to repair substandard elements.

Not all occupants are capable of assessing the need for repair of their dwelling.

The sample of dwellings from the National Housing Study, for which both occupant and expert ratings of dwelling need for repair are available, revealed that one in four occupants underestimated the need for repairs. Low-income homeowners (below $20 000) had the highest incidence of inaccurate assessments and were more likely to underestimate the repair need of their dwelling. In general, the correspondence was

better for homeowners than landlords, for newer properties and for properties in better condition.

Repair requirements for dwellings constructed in the 1960s, 1970s and 1980s are substantial.

Despite the markedly higher incidence of repair need in the older housing stock, the incidence of repair requirements among the stock constructed during the 1960s, 1970s and 1980s reveals that housing maintenance and repairs are important considerations for newer dwellings as well. Dwellings constructed after 1960 account for 27 per cent of the stock in need of major repair and 42 per cent of the minor repair requirements.

B. RESIDENTIAL RENOVATION MARKET

About 50 per cent of homeowners and 60 per cent of landlords undertook renovations in 1985.

Half of the homeowners responding to the National Housing Study indicated that they had undertaken some renovation activity in 1985. A somewhat larger proportion, (60 per cent) of landlords reported doing work. Homeowners spent an average of $3 380 and landlords $1 815 per unit on renovations in 1985. A comparison of the household characteristics of homeowner renovators and non-renovators revealed that renovators tended to be younger, married with children and have higher incomes.

The Residential Renovation Industry Survey revealed that renovation firms are older and larger than previously believed.

According to the Residential Renovation Industry Survey, 32 per cent of firms surveyed have been doing renovation work for more than 10 years. These firms were also more likely to utilize written contracts and offer written guarantees for their work. Two thirds of the firms surveyed reported that renovation work represented more than 50 per cent of their sales. The average firm size was just over five employees.

C. MARKET PROBLEMS

The National Housing Study revealed that homeowners with incomes below $20 000 were more likely to occupy dwellings in need of major repairs. They also have a lower propensity to undertake renovation work.

Homeowners with incomes less than $20 000 comprised 29 per cent of the sample population but represented 42 per cent of the

dwellings in need of major repair. This was not observed for rental dwellings. Low-income tenant households were represented in the group of dwellings in need of major repair in proportion to their presence in the sample.

Many homeowners and landlords who recognized a need for repairs, did not undertake any work in 1985.

Of homeowners who did not renovate but expressed a need for repairs, 41 per cent cited cost as a reason for not renovating. Other reasons were cited much less frequently including fear of property tax increases (7.2%), high interest rates (4.3%), government red tape (2.6%), loan refusals (1.6%) and unsuitable loan terms (1.3%).

Landlords cited cost less frequently and financing problems (interest rates, loan terms) more frequently than homeowners. High costs were cited by 30.6 per cent of landlords, fear of property tax increases (8.8%), high interest rates (8.7%), unsuitable loan terms (6.0%), government red tape (5.4%) and loan refusals (1.7%).

The high cost response would be indicative of an affordability problem for those households who were unable to afford the cost of the work. Where an outstanding repair requirement also existed, these households would be unable to access a minimum level of housing quality. The "high cost" response could also be indicative of the owner's lack of information of the benefits of renovation or of personal preference for other goods or services.

Renovation induced rent increases caused financial problems for tenants.

Of the tenants surveyed in 1986 who occupied dwellings renovated in 1985, 18.6 per cent reported rent increases, which averaged almost 12 per cent, immediately after the renovations. Over one third of the rent increases were for more than 10 per cent and just over one quarter were for less than 5 per cent. Two thirds of these tenants reported that the rent increase caused a financial problem; 16.9 per cent indicating a serious financial problem.

Neighbourhood effects were found to exert some influence over property owners' decisions to renovate.

Evidence from the National Housing Study showed that neighbourhood quality did not influence the decision to renovate for homeowners. Landlords were more likely to renovate properties in good quality neighbourhoods although the relationship was not strong. Both homeowner and landlord

renovation decisions, however, were more strongly influenced by changes in neighbourhood quality. Renovation activity was most likely to occur in improving neighbourhoods, regardless of the property's need for repairs.

Owner renovators rated informal information sources (personal experience, word of mouth, professional advice) more useful than books and pamphlets and training courses.

The responses to the National Housing Study revealed that renovating property owners relied on a broad variety of information sources. Most frequently cited by homeowners and landlords were personal experience (90%, 52%), word of mouth (76%, 54%) and professional advice (62%, 38%). Those three sources were also rated the most useful by both homeowner and landlord renovators. Books and pamphlets, while cited by 61 per cent of homeowners, were rated much lower than the other three sources of information.

Access to financing was cited by some firms as a problem.

Three-quarters of the firms surveyed used loan or line of credit financing and about one-third of these reported that this financing was not easily obtained. Ease of access to financing appears to be more strongly related to length of time in the business (track record), rather than firm size.

Regulatory impacts on renovation firms were less widespread than expected, but had significant impacts on some firms.

Although the percentage of renovation firms assessing any single regulation as having a definite to big impact on operating costs was less than 30 per cent, such firms for the most part agreed on the categories of most concern. Building codes and the permits and approvals process were the regulations identified as having a definite to big operating cost impact by the most firms (26% and 27% respectively). However, one half of all firms surveyed cited some form of regulation as having a significant impact on their operations.

Renovation contractors rated building materials suppliers and word of mouth as the most useful and most used sources of information.

Respondents to the Residential Renovation Industry Survey indicated that they used building materials suppliers (95%), word of mouth (93%), clients themselves (86%) and trade publications (79%) as sources of information. Training courses (47%), seminars/conferences (53%), demonstration projects (60%) and government publications (68%) were used least often. The usefulness of these information sources roughly paralleled their

use. Building material suppliers and word of mouth were rated useful by over half of users. Government publications and seminars/conferences/training courses received the lowest usefulness ratings.

D. SUITABILITY OF RECENT PROGRAMS

Recent and current CMHC government programs related to renovation have generally been successful in achieving their objectives.

The Residential Rehabilitation Assistance Program (RRAP) is the major CMHC rehabilitation initiative intended to achieve social objectives. An evaluation of the pre-1986 program concluded that the homeowner component was well targetted to low-income households. The rental component was less well targeted and this was attributed, in part, to tenant displacement resulting from post-rehabilitation rent increases.

The Canadian Home Renovation Plan (CHRP) used residential renovation as a vehicle for employment generation. Predominantly serving low to moderate income households, CHRP required them to provide a major portion of the cost of the work from their own resources. Because of this leveraging effect, CHRP expenditures had a greater direct and indirect impact on the renovation industry than does RRAP.

E. IMPLICATIONS

RRAP responds to the rehabilitation needs of low-income households and the current consultation process addresses ways of improving the effectiveness of the program.

RRAP became a component of the social housing policy in 1986 and is currently the subject of a consultation process with the aim of addressing a number of problem areas and concerns. A number of issues relevant to RRAP have been identified in the overview such as affordability problems, underestimation of need and lack of information on the part of low-income homeowners, and tenant affordability and displacement. Of the National Housing Study homeowners living in dwellings in need of major repairs, 29 per cent would be eligible for RRAP assistance based on current eligibility criteria. However, not all of these eligible households would receive sufficient forgiveness to cover the cost of all required repairs. The success of RRAP is therefore dependent on the ability and willingness of the households to provide or obtain the additional funds.

The usefulness of information on renovation could be enhanced through the identification of information needs, the development of appropriate informational material and the implementation of marketing and distribution strategies appropriate to the informal nature of the renovation market.

The development of informational materials and the implementation of a communication strategy to provide appropriate information on renovation to participants in the renovation market can potentially address a number of issues identified in the overview. These include: the need to disseminate information on technological and organizational approaches to addressing the high cost of repairs; the lack of awareness of repair requirements on the part of occupants and owners of properties in need of repairs; and the need for skills development in management and marketing for renovation contractors.

CMHC can continue to support and promote regulatory change to reduce the impacts of government regulations on the cost and complexity of undertaking renovations.

Building codes and zoning were cited as problems affecting the operation of renovation firms and the timeliness and cost of renovation work. Although for the most part, these aspects of the regulatory process are beyond CMHC's mandate, CMHC can continue to promote regulatory change and improvement by participating with other levels of government in the development of guidelines and by conducting or sponsoring research into the effects of regulations and areas for their improvement.

APPENDIX A
DATA SOURCES

1. National Housing Study

The National Housing Study (NHS) provided CMHC with timely and accurate data on current housing conditions and the nature and extent of home renovation activity in 1985 for a representative sample of Canada's low rise residential stock.[1]

The methodology for the project was based on refinements to telephone and mail survey techniques developed during the course of other major CMHC studies. The main features of the methodology can be summarised as follows:

- The study population was defined as all owners, renters and landlords of low-rise dwellings (i.e., four stories or less) in Canada.
- The survey was conducted by mail, with separate questionnaires being sent to homeowners, tenants and landlords for self-completion. Reminders and follow-up questionnaires were also sent at scheduled intervals.
- Homeowners and tenant respondents were first contacted by telephone to solicit agreement to receive a questionnaire.
- The sample of telephone numbers for homeowners and tenants was selected with a computerized random-digit generation procedure. Sample stratification ensured a minimum number of respondents in each province.
- Landlords were identified by tenants. Where necessary, additional mailing information was acquired though both supplementary research and direct contact with landlords. The second landlord questionnaires were delivered by courier.
- All mailing list and survey data were computerized. Each case (i.e., potential respondent) was assigned a unique identifier that permitted tracking through the three waves of the survey. Common elements of the case identifiers also permitted the linkage of tenants and landlords.
- A brief telephone survey was conducted with a sample of non-respondents to provide data to test for bias in the responding sample.

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[1] A technical report on the conduct of the data collection is available in Ekos Research Associates, Final Report for the 1986 National Housing Study, a report prepared for the Program Evaluation Division, CMHC, February 1987.

A total of 24 095 questionnaires were mailed (excluding reminders); 16 264 to homeowners, 4 996 to tenants and 2 835 to landlords. The following table summarises the final sample characteristics and the response rates.

	NUMBER OF ELIGIBLE CASES	COMPLETED QUESTIONNAIRES RECEIVED	OVERALL RESPONSE RATE
Homeowners	15 865	8 972	56.6%
Tenants	4 476	2 568	57.4%
Landlords	2 383	977	41.0%

The survey of non-respondents also provided data to revise the estimated number of eligible respondents. The findings resulted in adjusted response rate calculations of 68 per cent for homeowners and tenants, and 53 per cent for landlords.

The National Housing Study was conducted between the months of August and December 1986.

2. Residential Renovation Industry Survey

The Residential Renovation Industry Study (RRIS) was undertaken to provide a description of the structure and operation of renovation firms identifying, in particular, the related impacts of current government involvement in this industry.[1] The survey polled company managers about the nature of their business and about operating conditions within the industry. The survey represents a first-time effort to collect national statistical evidence on industry characteristics and opinions.

Lists of firms were unfortunately not available on a national, provincial or local basis, except for Toronto and Ottawa. Company names were compiled from the most recently-published Yellow Page directory for each municipality across the country. The population of renovation firms was based on those listed under home improvement-related categories.

A sample of renovation firms was drawn by taking all of the 175 firms identified in the Atlantic region, and randomly selecting

[1] National Residential Renovation Industry Survey, Summary of Preliminary Findings, Program Evaluation Division, CMHC, February 1987.

737 from each of the remaining four regions for a total of 3 125 firms. All of the firms identified in the Yukon and Northwest Territories were included in the British Columbia sample.

One questionnaire was mailed to each firm to complete and return by pre-paid mail. A reminder card and a second questionnaire were sent to all sampled firms. Those selected for the survey were promised a summary of the results, as an incentive to reply and as a response reward. All respondents were guaranteed anonymity.

Survey respondents were asked to refer to the year 1985 when answering the questionnaire. As a result, some firms chosen for the study were subsequently eliminated if they indicated they were not in the business of residential renovation in that year. The initial sample was also reduced by the number of questionnaires returned by the post office due to inaccurate mailing addresses.

The overall response rate for the survey was 36 per cent. Considering the mail-out nature of the survey and the fact that those replying received no advance notice about the study, this is a very good level of response.

There were at least 200 replies from each region with the exception of the Atlantic, for which there were only 31 replies. The Atlantic region results, although too small to be representative of that area, are included in the summary results for comparative purposes.

It is important to understand that results from this survey represent the opinions of only those renovation firms for which a completed questionnaire was received. The information cannot be generalized to all companies in the renovation business since the survey sample is based only on those who advertise in the Yellow Page directories.

The Residential Renovation Industry Survey was conducted between the months of October and December 1986.

APPENDIX B
MEASURES OF DWELLING CONDITION

1. Approaches

Dwelling condition can be measured in a number of different ways. This section briefly reviews four approaches.

a) Absence of "Basic Facilities"

Indicators of "dwelling conditions" have not always been readily available. In the absence of such information, housing adequacy has often been judged according to the presence or absence of key features deemed to be "basic requirements".

In the past, indoor plumbing facilities such as hot and cold running water, baths or showers, and flush toilets have been frequently used as indicators of housing adequacy, a reflection of public health concerns. Progressive improvements in housing quality in the post-war period have significantly diminished the relevance of indoor plumbing facilities as a principal indicator of housing adequacy.

Improvements in housing quality are not the only reason for the need to refine indicators of housing adequacy, however. Clearly, focusing only on indoor plumbing facilities overlooks the importance of other household equipment, such as heating and electrical systems.

Another shortcoming of the "basic facilities" approach in general is that dwellings have typically been judged solely on the presence or absence of household equipment, without reference to the quality of these facilities or their state of repair. This is likely to significantly underestimate the extent of repair need.

b) Need for Repairs

The analysis of household equipment provided by the basic facilities approach provides one indicator of dwelling condition. It is incomplete in that it overlooks the state of repair of the dwelling itself (e.g. walls, floors, roof). This aspect of renovation need may be estimated through the use of global measures of repair requirements. A three point classification is used by Statistics Canada in its Census and Survey of Household Facilities and Equipment. This approach asks respondents if their dwelling is in need of any repairs. The following responses are presented:

- Yes, Major repairs to correct, for example, corroded pipes, damaged electrical wiring, sagging floors, bulging walls, damp walls and ceilings, crumbling foundation, etc.

- o Yes, Minor repairs to correct, for example small cracks in interior walls and ceilings, broken light fixtures and switches, cracked or broken window panes, leaking sink, some missing shingles or siding, some peeling paint, etc.

- o No, Regular maintenance includes, for example fixing leaking faucets, clogged gutters or eavestroughs, etc.

Only repair work which is required to restore the dwelling to its original condition is meant to be included in the above categories. Desirable remodelling, additions, conversions, or energy improvements are excluded.

c) Dwelling Component Condition Ratings

While the "need for repairs" approach described above is capable of yielding rough estimates of the magnitude of repair need, it does not provide any information concerning the specific repairs required.

This difficulty can be overcome through the collection of data which provide detailed assessments of the condition of the individual dwelling components which make up the dwelling exterior (e.g. exterior walls, roofs, chimneys etc.), interior (e.g. finished carpentry, flooring, drywall etc.), and mechanical systems (e.g. plumbing, heating and electrical systems). For each individual component, a condition rating or repair need assessment can be obtained.

d) Estimates of Repair Costs

Dollar value estimates of the costs of repairs required to bring dwellings up to a given standard represent yet another important indication of the extent of repair need. Because they are measured on a ratio scale, repair cost data provide a much more precise estimate of the extent of need than that provided by the ordinal ranking schemes described above.

Repair cost data are particularly valuable in that they provide a common basis for comparing the magnitude of existing requirements with expenditures. Furthermore, cost estimates are an important policy variable insofar as thresholds of financial assistance can be established in the event that such assistance is deemed to be necessary or desirable.

This section has presented a variety of ways in which dwelling condition can be measured. Each of these measurement approaches have different data requirements. The issue of data availability is reviewed in the next section.

2. Data Sources

Data sources which allow for the measurement of national dwelling condition requirements are few in number. The principal data sources are described below.

a) Census

The Census has traditionally been a key source of basic housing information. Although it provides an indication of the age of the existing stock, it is less valuable as a source of data pertaining to dwelling condition. While trained census enumerators rated the structural condition (need for repairs) of dwelling units from 1941 to 1961, this information was not collected in 1971 when the Census shifted to self-enumeration. A need for repairs question was subsequently reinstated in the 1981 Census, with occupants rating the condition of their dwelling. The Census no longer collects data on presence of the complete range of basic facilities.

Due to the large numbers of households surveyed and the extensive coverage of the sample, Census data are generally superior to those available from other sources. Their principal drawback has been that they are only available at ten year intervals. With the shift to self-enumeration, further questions have been raised regarding the accuracy of occupant provided assessments of repair requirements and their comparability with those developed by Census enumerators in previous years.

b) HIFE Microdata

Some of the problems associated with Census derived indicators of repair need are overcome in the Household Income, Facilities and Equipment (HIFE) microdata files. HIFE is prepared by Statistics Canada by linking information collected in four separate surveys (the Household Facilities and Equipment Survey (HFE), the Labour Force Survey (LFS), the Survey of Consumer Finances (SCF), and the Rent Survey).

Among HIFE's positive attributes are the fact that the data are released at shorter time intervals (biennially prior to 1982 and annually from 1985 onwards). The HIFE microdata files contain information on the presence of basic facilities and, since 1982, on the need for repairs.

There are a number of differences between the HIFE and Census data which affect the comparability of estimates of dwelling condition derived from the two sources. Unlike the Census, the HFE survey uses trained interviewers to collect the data (either over the telephone or by personal interview in the home). When

properly trained, interviewers can improve the accuracy and consistency of the survey data, insofar as they can more fully explain the question and the response categories if required. Interviewers conducting the HFE survey receive considerable advance training so as to ensure the accuracy and consistency of the information collected.

Apart from differences in data collection methodology, the HFE survey also deviates from the Census in terms of the precise wording of the "need for repairs" question used. Differences exist both in the ordering of the response categories and in the types of work examples given.

There are also differences in the size and characteristics of the population sample included in the two surveys. Because HIFE data are derived from a much smaller sample (34 262 in 1985) than the Census, the potential for disaggregated analyses is much more limited. In addition, the coverage of the HIFE sample excludes residents of the Yukon and the Northwest Territories, Indian Reserves, and a variety of categories of "collective" dwellings (e.g. lodging houses, nursing homes, student residences, hotels, military barracks, hospitals, prisons etc.).

Because of these underlying differences, estimates of repair need derived from the Census and HIFE microdata are not directly comparable.

c) Special Surveys

The most comprehensive and detailed information pertaining to house condition and repair need is available only through "special surveys". The Survey of Housing Units (undertaken in 1974) and the recent National Housing Study (undertaken in 1986) are two examples of special surveys commissioned by Canada Mortgage and Housing Corporation for the purpose of providing detailed indicators of housing conditions and occupant characteristics.

The National Housing Study warrants special mention here, as it comprises the most comprehensive and up to date source of data available pertaining to renovation need and renovation behavior in Canada. For this reason, it is the principal source of data drawn upon in the discussion of repair need in this report.

The National Housing Study was designed to address some of the problems inherent in the Census and HIFE based estimates of repair need. Accordingly, the NHS combined aspects of the data collection methods used in both of these surveys. As was the case with the Census, NHS survey respondents completed questionnaires without the aid of an interviewer. The wording of the "need for repairs" question adopted by the National

Housing Study corresponds to that used in the Household Facilities and Equipment (HFE) survey instrument.

The National Housing Study obtained responses for 8 972 homeowners, 2 568 renters and 977 landlords of low rise, self-contained dwellings. Excluded from the sample were high rise dwellings (over four stories), collective dwellings (with common dining quarters or other shared facilities) public, non-profit and cooperative housing, and dwellings located in the Yukon and Northwest Territories.[1] Respondents to the NHS survey answered a range of questions pertaining to household characteristics, dwelling conditions, the nature of renovation work undertaken in 1985 or planned for 1987, and the underlying motivations and obstacles which influence renovation activity. In addition to providing a wealth of detailed information on the precise nature of repair requirements, the National Housing Study data present a unique opportunity for making direct comparisons of the different approaches to measuring dwelling condition. A sub-sample of 1 874 dwellings were visited by CMHC building experts to provide supplementary data on dwelling condition, quality of renovation work and the costs of repairs required to bring dwellings up to minimum standards.

While the inspections sample is not a true random sample, it has been found to be representative of the sample at large. (The characteristics of the two samples are compared in Tables B.1, B.2 & B.3). Using the inspections data as a benchmark for comparison also allows for the more accurate interpretation of estimates of repair need provided by occupants.

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[1] The National Housing Study is described in greater detail in Ekos Research Associates, The Final Report for the 1986 National Housing Study, a report prepared for the Program Evaluation Division, CMHC, 1987.

TABLE B.1
COMPARISON OF NATIONAL HOUSING STUDY
OWNER/OCCUPANT AND EXPERT ASSESSMENT SAMPLES:
HOMEOWNERS

	NHS OWNER/OCCUPANTS (%)	CMHC BUILDING EXPERTS (%)
Language		
English	82.1	77.8
French	17.9	22.2
	n=8 972	n=1 726
Type of building		
Single detached	88.1	89.8
Other	11.9	10.2
	n=8 820	n=1 709
How long lived there		
Less than 1 year	5.5	5.7
One to two years	8.5	9.1
Two to five years	18.7	19.6
Five to ten years	23.4	23.7
Ten to twenty years	23.4	23.1
More than twenty years	20.5	18.8
	n=8 815	n=1 703
Building in need of repair		
Yes - major repairs	9.5	13.7
Yes - minor repairs	21.4	23.5
No - regular maintenance	69.2	62.8
	n=8 662	n=1 670
Do any renovation work in 1985?		
Yes	50.0	55.9
No work done	50.0	44.1
	n=8 583	n=1 662
Description of Household		
One person alone	7.4	6.2
One adult with children	4.3	4.0
Married no children	23.1	23.1
Married with children	60.8	63.3
Two or more unrelated adults	0.9	0.7
Other	3.5	2.7
	n=8 690	n=1 683
Education		
Primary school	12.4	11.1
High school	43.2	39.7
Some college	9.5	9.5
College graduate	9.9	10.3
Some university	9.0	11.2
University graduate	10.4	12.2
Post graduate	5.5	6.0
	n=8 477	n=1 638

TABLE B.1
COMPARISON OF NATIONAL HOUSING STUDY
OWNER/OCCUPANT AND EXPERT ASSESSMENT SAMPLES:
HOMEOWNERS (continued)

	NHS OWNER/OCCUPANTS (%)	CMHC BUILDING EXPERTS (%)
Occupation		
Farming, Fishing	6.3	5.4
Labourer	6.8	6.4
Semi-skilled	5.9	6.4
Skilled trade	12.1	13.6
Sales and service	14.9	13.9
Professional	18.1	19.8
Managerial	14.2	16.9
Homemaker	15.7	12.2
Other	5.9	5.3
	n=8 310	n=1 615
Employment Status		
Self-employed	12.3	12.5
Full-time	47.8	48.0
Part-time	11.8	11.4
Unemployed	7.0	6.2
Student	0.7	0.7
Retired	16.2	17.4
Other	4.1	3.7
	n=8 390	n=1 643
Province		
Alberta	11.7	11.9
British Columbia	16.4	12.7
Manitoba	6.4	5.9
New Brunswick	7.5	7.1
Newfoundland	5.4	6.2
Nova Scotia	9.5	11.1
Ontario	16.0	12.7
Prince Edward Island	3.0	3.3
Quebec	17.9	22.2
Saskatchewan	6.3	7.0
	n=8 972	n=1 726
Number of rooms in dwelling	$\bar{x}$= 6.91	$\bar{x}$= 7.01
	n=8 908	n=1 715
Age of dwelling	$\bar{x}$=28.64	$\bar{x}$=29.27
	n=8 549	n=1 660
Age of respondent	$\bar{x}$=45.5	$\bar{x}$=45.9
	n=8 690	n=1 687
Selling price of dwelling	$\bar{x}$=$82 120	$\bar{x}$=$80 034
	n=8 125	n=1 647
Household income	$\bar{x}$=$38 006	$\bar{x}$=37 660
	n=7 287	n=1 561

TABLE B.2
COMPARISON OF NATIONAL HOUSING STUDY
OWNER/OCCUPANT AND EXPERT ASSESSMENT SAMPLES:
LANDLORDS

	NHS OWNER/OCCUPANTS (%)	CMHC BUILDING EXPERTS (%)
Language		
English	62.2	69.7
French	31.8	30.3
	n=977	n=145
Type of building		
Single detached	29.8	21.7
Other	70.2	78.3
	n=950	n=143
Building in need of repair		
Yes - major repairs	10.7	12.1
Yes - minor repairs	23.2	22.7
No - regular maintenance	66.0	65.2
	n=942	n=141
Who owns building		
Private corporation	17.0	21.0
Private individual	56.0	53.1
2 or more private individuals	22.2	20.3
Other	4.8	5.6
	n=952	n=143
Any renovation done in 1985?		
Yes	59.7	63.5
No work done	40.3	36.5
	n=913	n=137
Occupation		
Farming, Fishing	4.3	3.1
Labourer	7.9	3.1
Semi-skilled	7.1	8.5
Skilled trade	11.3	10.9
Sales and service	10.8	9.3
Professional	18.2	20.9
Managerial	21.6	28.7
Homemaker	6.3	3.9
Other	12.6	11.6
	n=890	n=129
Have an outstanding mortgage		
Yes	62.5	71.8
No	27.5	28.2
	n=928	n=142

TABLE B.2
COMPARISON OF NATIONAL HOUSING STUDY
OWNER/OCCUPANT AND EXPERT ASSESSMENT SAMPLES:
LANDLORDS (continued)

	NHS OWNER/OCCUPANTS (%)	CMHC BUILDING EXPERTS (%)
Province		
Alberta	9.8	9.7
British Columbia	12.9	11.7
Manitoba	4.6	4.1
New Brunswick	6.3	2.8
Newfoundland	1.9	2.1
Nova Scotia	8.4	8.3
Ontario	15.4	18.6
Prince Edward Island	3.5	5.5
Quebec	32.5	30.3
Saskatchewan	4.6	6.9
	n=977	n=145
Number of units in building	$\bar{x}$=14.01 n=924	$\bar{x}$=17.33 n=142
Number of years owned the building	$\bar{x}$=11.05 n=907	$\bar{x}$= 9.32 n=143
Age of building	$\bar{x}$=35.39 n=907	$\bar{x}$=31.00 n=137
Selling price of dwelling	$\bar{x}$=$420 105 n=786	$\bar{x}$=$620 262 n=123
Percentage of assets building represents	$\bar{x}$=44.42 n=666	$\bar{x}$=43.16 n=104

TABLE B.3
COMPARISON OF NATIONAL HOUSING STUDY
OWNER/OCCUPANT AND EXPERT ASSESSMENT SAMPLES:
TENANTS

	NHS OWNER/OCCUPANTS (%)	CMHC BUILDING EXPERTS (%)
Language		
English	71.3	65.6
French	28.7	34.4
	n=2 568	n=93
How long lived there		
Less than 1 year	23.1	22.2
One to two years	25.5	32.2
Two to five years	28.5	24.4
Five to ten years	12.9	11.1
Ten to twenty years	6.9	7.8
More than twenty years	3.1	2.2
	n=2 524	n=90
Building in need of repair		
Yes - major repairs	12.2	8.0
Yes - minor repairs	32.8	18.4
No - regular maintenance	55.0	73.6
	n=2 400	n=87
Any renovation done in 1985?		
Yes	23.2	13.8
No work done	76.8	86.2
	n=2 427	n=87
Description of Household		
One person alone	25.5	18.7
One adult with children	9.5	16.5
Married no children	22.6	19.8
Married with children	31.4	36.3
Two or more unrelated	6.0	4.4
Other	5.0	4.4
	n=2 491	n=91
Education		
Primary school	7.1	11.1
High school	41.3	33.3
Some college	12.3	13.3
College graduat	12.6	11.1
Some university	9.9	13.3
University graduate	11.9	14.4
Post graduate	4.9	3.3
	n=2 415	n=90

TABLE B.3
COMPARISON OF NATIONAL HOUSING STUDY
OWNER/OCCUPANT AND EXPERT ASSESSMENT SAMPLES:
TENANTS (continued)

	NHS OWNER/OCCUPANTS (%)	CMHC BUILDING EXPERTS (%)
Occupation		
Farming, Fishing	2.0	2.2
Labourer	8.7	14.4
Semi-skilled	5.6	2.2
Skilled trade	7.7	6.7
Sales and service	21.9	13.3
Professional	19.4	23.3
Managerial	10.0	11.1
Homemaker	14.5	14.4
Other	10.0	12.2
	n=2 403	n=90
Employment Status		
Self-employed	5.8	5.8
Full-time	53.9	54.7
Part-time	11.7	9.3
Unemployed	10.9	10.5
Student	5.1	5.8
Retired	7.7	9.3
Other	4.9	4.7
	n=2 367	n=86
Province		
Alberta	10.9	5.4
British Columbia	18.8	12.9
Manitoba	4.6	3.2
New Brunswick	4.6	2.2
Newfoundland	1.9	1.1
Nova Scotia	6.6	8.6
Ontario	14.3	19.4
Prince Edward Island	2.5	6.5
Quebec	31.1	33.3
Saskatchewan	4.8	7.5
	n=2 568	n=93
Number of rooms in dwelling	$\bar{x}$=4.80 n=2 546	$\bar{x}$=4.68 n=90
Age of Tenant	$\bar{x}$=35.47 n=2 444	$\bar{x}$=35.74 n=86
Monthly rent	$\bar{x}$=$389.07 n=2 395	$\bar{x}$=$358.87 n=86
Household income	$\bar{x}$=$25 174 n=1 768	$\bar{x}$=$25 067 n=61

TABLE C.1

1985 RENOVATION ACTIVITY BY TYPE
HOMEOWNERS

BUILDING COMPONENT	TYPE OF RENOVATION WORK: MAINTENANCE (%)	REPAIRS (%)	IMPROVEMENTS (%)	ANY WORK (%)	(N)
EXTERIORS	20.2	19.1	21.9	42.4	3 680
Sitework	8.7	5.0	12.8	25.2	2 143
Walls					
structure	4.0	1.8	2.7	8.3	765
finish: wood	5.1	1.0	2.0	7.9	758
finish: other	2.7	1.3	2.2	6.1	527
Roof, Chimney					
gutters, downspouts	4.6	4.9	2.8	11.9	1 016
roof coverings	3.7	5.4	1.4	10.2	819
chimney	2.7	2.8	1.3	6.7	598
Doors, Windows	5.7	5.6	6.3	17.2	1 470
Steps, Porches	5.3	5.0	5.3	15.2	1 391
INTERIOR	14.7	9.5	24.0	38.0	3 244
Carpentry					
floors	2.3	2.6	5.9	10.6	925
walls	3.4	2.4	9.2	14.7	1 300
cabinets, shelves	2.4	1.9	5.2	9.4	810
doors	2.2	1.6	7.5	11.2	938
Walls					
drywall/plaster	2.9	2.8	7.4	12.8	1 074
paint/paper	10.8	3.2	14.0	27.2	2 302
Floors					
hardwood	1.2	0.7	2.4	4.2	323
carpet	2.8	2.9	7.8	13.2	1 175
tile	1.9	2.1	5.4	9.2	755
MECHANICAL SYSTEMS	8.7	13.8	19.5	32.7	2 809
Electrical					
lighting fixtures	1.9	2.5	8.5	12.7	1 076
wiring	1.5	2.7	6.5	10.5	903
Heating/Cooling					
furnace	2.9	3.4	2.1	8.2	696
fireplace	1.7	0.9	1.7	4.3	400
ductwork	1.4	0.8	1.3	3.4	299
Plumbing					
pipes	2.1	3.1	4.0	9.0	768
fixtures	2.6	3.9	5.0	11.3	944
hot water heater	1.6	3.1	1.1	5.7	525
Insulation					
attic	1.3	1.6	3.7	6.4	532
wall	0.9	1.3	3.6	5.6	507
doors, windows	2.2	2.4	3.8	8.2	720
Other Mechanical	0.2	0.7	1.2	2.0	176
OVERALL	27.2	27.1	36.3	51.0	4 420

SOURCE: National Housing Study, CMHC, 1986.

TABLE C.2

1985 RENOVATION ACTIVITY BY TYPE
LANDLORDS

BUILDING COMPONENT	TYPE OF RENOVATION WORK: MAINTENANCE (%)	REPAIRS (%)	IMPROVEMENTS (%)	ANY WORK (%)	(N)
EXTERIORS	30.5	24.5	18.6	52.2	482
Sitework	13.0	6.6	9.1	27.4	246
Walls					
structure	7.2	3.7	2.5	13.0	111
finish: wood	8.6	1.3	0.9	10.7	99
finish: other	4.0	1.6	2.0	7.6	64
Roof, Chimney					
gutters, downspouts	7.7	7.0	3.5	17.8	159
roof coverings	7.0	6.3	2.3	15.3	129
chimney	3.6	2.0	1.2	6.8	62
Doors, Windows	12.5	8.3	5.9	25.6	223
Steps, Porches	10.1	9.6	3.6	22.8	205
INTERIOR	29.3	17.9	19.3	48.7	445
Carpentry					
floors	7.9	6.0	6.0	19.5	159
walls	9.6	4.6	6.7	20.5	176
cabinets, shelves	5.0	4.1	5.0	13.8	117
doors	8.8	4.9	4.4	17.9	154
Walls					
drywall/plaster	9.5	6.1	5.6	20.3	179
paint/paper	21.0	6.8	8.6	35.0	319
Floors					
hardwood	3.6	1.6	1.5	6.7	54
carpet	10.1	5.9	7.0	22.5	201
tile	6.9	6.3	5.1	17.6	148
MECHANICAL SYSTEMS	20.9	22.8	17.0	46.4	430
Electrical					
lighting fixtures	6.6	5.4	4.2	15.6	138
wiring	3.5	4.6	4.3	12.2	109
Heating/Cooling					
furnace	7.2	5.6	2.5	15.0	142
fireplace	1.2	0.3	0.2	1.8	18
ductwork	1.5	1.3	0.6	3.3	30
Plumbing					
pipes	7.5	8.1	3.0	18.0	161
fixtures	8.1	7.9	5.1	20.5	179
hot water heater	5.6	8.1	2.3	15.5	142
Insulation					
attic	1.4	2.9	2.7	6.9	58
wall	1.4	3.3	2.3	6.8	60
doors, windows	4.8	4.7	3.6	12.8	112
Other Mechanical	1.1	1.0	1.3	3.3	31
OVERALL	42.6	36.8	33.6	60.7	571

SOURCE: National Housing Study, CMHC, 1986.

TABLE C.3

1985 RENOVATION ACTIVITY BY METHOD
OF DOING THE WORK
HOMEOWNERS

	METHOD OF DOING RENOVATION WORK					
TYPE OF JOB	OWN LABOUR ONLY (%)	BOUGHT MATERIALS ONLY (%)	HIRED LABOUR ONLY (%)	HIRED FIRM ONLY (%)	FIRM/ LABOUR MATERIALS (%)	n
EXTERIOR						
Sitework	5.5	66.9	4.7	17.0	5.8	2043
Walls						
structure	8.4	64.0	5.6	17.0	4.9	726
finish: wood	8.3	72.4	5.0	8.8	5.4	722
finish: other	7.6	47.7	7.3	29.8	7.6	502
Roof, Chimney						
gutters, downspouts	8.9	48.1	6.9	32.8	3.3	968
roof coverings	7.3	41.7	6.4	37.2	7.4	779
chimney	8.0	44.2	9.6	32.8	5.4	570
Doors, Windows	6.3	51.3	6.4	29.8	6.2	1379
Steps, Porches	7.0	67.6	6.8	12.1	6.6	1320
INTERIOR						
Carpentry						
floors	9.0	62.1	6.9	14.8	7.1	870
walls	6.2	72.9	5.8	9.5	5.6	1236
cabinets, shelves	9.1	69.9	5.8	10.2	5.0	759
doors	6.8	62.4	7.7	17.7	5.5	883
Walls						
drywall/plaster	6.5	67.8	6.4	12.7	6.7	1030
paint/paper	5.7	79.1	4.8	5.6	4.7	2182
Floors						
hardwood	6.1	58.7	8.9	17.6	8.8	300
carpet	5.9	46.6	8.1	33.3	6.1	1104
tile	10.2	55.1	6.6	22.5	5.6	718
MECHANICAL SYSTEMS						
Electrical						
lighting fixtures	6.4	68.2	6.4	13.3	5.6	1022
wiring	6.5	49.2	9.4	29.0	6.0	863
Heating/Cooling						
furnace	5.9	25.2	10.1	56.9	1.9	651
fireplace	7.2	60.2	7.5	22.1	2.9	373
ductwork	7.3	49.6	8.8	31.7	2.6	280
Plumbing						
pipes	9.0	53.5	7.9	24.5	5.0	725
fixtures	6.9	59.6	5.9	20.9	6.5	905
hot water heater	11.1	39.8	8.1	37.6	3.4	491
Insulation						
attic	6.2	44.7	6.3	40.3	2.5	501
wall	7.3	66.7	4.2	17.7	4.2	480
doors, windows	8.4	61.6	4.8	21.6	3.6	679

SOURCE: National Housing Study, CMHC, 1986.

TABLE C.4

1985 RENOVATION ACTIVITY BY METHOD OF DOING THE WORK
LANDLORDS

TYPE OF JOB	METHOD OF DOING RENOVATION WORK: OWN LABOUR ONLY (%)	BOUGHT MATERIALS ONLY (%)	HIRED LABOUR ONLY (%)	HIRED FIRM ONLY (%)	FIRM/ LABOUR MATERIALS (%)	n
EXTERIOR						
Sitework	7.6	34.9	14.6	28.6	14.4	222
Walls						
structure	9.0	33.9	14.9	27.2	15.0	103
finish: wood	13.9	36.9	13.0	22.1	14.0	90
finish: other	17.8	20.6	6.9	37.0	17.7	59
Roof, Chimney						
gutters, downspouts	13.5	29.6	11.4	41.8	3.6	146
roof coverings	9.8	21.6	11.6	51.5	5.5	120
chimney	25.1	21.2	20.8	32.8	0.2	55
Doors, Windows	13.9	31.5	15.9	25.8	12.9	202
Steps, Porches	14.3	38.1	15.7	19.9	12.0	190
INTERIOR						
Carpentry						
floors	9.4	30.8	15.3	26.8	17.7	144
walls	8.9	39.6	13.7	18.7	19.1	164
cabinets, shelves	8.2	39.2	17.4	21.1	14.0	107
doors	10.4	27.8	17.5	23.8	20.6	137
Walls						
drywall/plaster	7.3	37.5	12.9	23.5	18.9	165
paint/paper	7.0	40.2	11.2	23.3	18.3	298
Floors						
hardwood	8.2	25.7	17.9	28.3	19.9	46
carpet	5.8	26.1	10.8	41.7	15.7	188
tile	11.7	27.6	13.2	23.6	23.9	139
MECHANICAL SYSTEMS						
Electrical						
lighting fixtures	5.8	37.9	10.8	26.3	19.3	124
wiring	4.4	21.0	16.7	46.1	11.7	100
Heating/Cooling						
furnace	6.9	15.4	9.6	61.9	6.3	131
fireplace	11.1	53.1	14.2	21.6	0.0	15
ductwork	0.0	28.5	20.1	42.6	8.8	27
Plumbing						
pipes	9.2	26.1	13.0	41.7	9.9	147
fixtures	11.4	37.6	12.4	26.7	11.9	167
hot water heater	6.7	26.8	12.8	47.9	5.8	131
Insulation						
attic	5.2	38.9	7.4	43.1	5.5	53
wall	7.5	42.3	5.8	27.6	16.8	55
doors, windows	10.0	27.3	9.9	34.5	18.4	99

SOURCE: National Housing Study, CMHC, 1986.

APPENDIX D
RENOVATION OF HERITAGE PROPERTIES

The renovation of a dwelling to protect its intrinsic cultural value benefits society as a whole as well as the individual property owner. This type of renovation, known as heritage conservation, may not be undertaken to the fullest extent possible, however, for two reasons. First, the property owner may be unaware of the cultural importance of a dwelling in need of repair or that of a building which has the potential to be converted into a residential use. Therefore the owner would not incorporate this benefit into his decision to renovate. Second, heritage property owners may only be evaluating the benefit of heritage-sensitive renovation to themselves rather than to society and so underestimate its true value. In either of these instances, a heritage property may be demolished rather than renovated, or renovated in a way that destroys its representative physical style.

Supplying more information to property owners on the advantages of heritage conservation to them may improve their level of awareness and the amount of heritage-sensitive work they undertake for their own gain. The level of work may still be less than desirable from society's point of view, however. If unprofitable to the individual heritage property owner, this type of renovation would not be undertaken. Owners of heritage property may have to be encouraged to do the work by means of a subsidy or by compensation when the value to society outweighs the value to the individual.

This section briefly discusses the evolution of the heritage conservation phenomenon, presents survey evidence on its magnitude, and evaluates the extent to which the heritage designation process addresses any lack of awareness and divergence between individual and social benefits which may be inhibiting heritage conservation.

A. EVOLUTION OF HERITAGE CONSERVATION IN CANADA

Support for heritage-sensitive renovation has been spawned by the growing preference for saving rather than demolishing and replacing housing in substandard condition or which has become functionally obsolete. The celebration of the Canadian centennial in 1967, together with the diffusion of the renovation movement in the United States, have increased heritage awareness in this country.

The establishment of the Heritage Canada Foundation, a private non-profit group initiated through the creation of a $12 million trust fund by the federal government, and the inauguration of a federal residential rehabilitation subsidy program, both in 1973, represent major turning points in public policy and in

public expenditures away from renewal through demolition and replacement, and toward renovation.[1]

1. Government Policy

Heritage conservation as a reason for renovating or as an aspect to be considered when undertaking the work is supported by current government policy. The Residential Rehabilitation Assistance Program (RRAP), although now directed towards households in core housing need, retains its support for renovation solutions which respect the heritage value of dwellings.

All provinces now have legal mechanisms which provide for the protection of heritage buildings. For example, in Ontario, the government is sponsoring a heritage policy review. It aims to spark discussion among citizens about the commitment of public resources to heritage conservation in the province, and on how to incorporate the activity more as an integral part of the economy.[2] In this review, heritage conservation is perceived not only for its direct cultural contribution, but for its indirect economic benefits, including job creation and tourism.

2. Activities of Private Heritage Groups

The Heritage Canada Foundation is probably the best known and most widely influential private heritage conservation group in the country. It funds area conservation efforts through a property program based on revolving funding, and assists in the conservation of the downtown areas of smaller towns by providing technical, design and management assistance under its Mainstreet program. The Foundation also exists as a national focal point for encouraging legislative changes to protect early buildings and increasing public awareness about the Canadian building heritage.

B. HERITAGE CONSERVATION BY PROPERTY OWNERS

There are only a few thousand residential heritage properties under government legislation. Information is available from the CMHC National Housing Study on the heritage-designated properties which were found in the survey sample. This

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[1] Heritage Conservation and Its Linkages with Residential Conservation", Program Evaluation Division, CMHC, 1985.

[2] Giving Our Past a Future, Ontario Ministry of Citizenship and Culture and the Ontario Heritage Foundation, April 1987.

information includes their incidence within the stock, the physical condition of the properties and the renovation behaviour of their owners.

As shown in Table D.1, about two per cent of the owners of dwellings surveyed in the National Housing Study reported that their dwelling was a heritage property.[1] However, for dwellings constructed before 1920, almost five per cent of owners reported that their dwelling had "heritage" significance. This is higher than other estimates of the number of designated heritage dwellings[2] and likely results from several features of he National Housing Study approach, notably the low rise sample and the self completion nature of the question. Nevertheless, the data reveal that heritage residential properties, or the designation of heritage properties, is largely an eastern Canada phenomenon. This reflects the older housing in these regions and the level of government involvement in the heritage designation process.

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[1] The survey asked if the building had been "recognized, listed or registered as a potential heritage property, or designated as a heritage property by the local, regional, provincial or federal government".

[2] Commonwealth Historic Resource Management Limited, Government Involvement in Residential Renovation, a report prepared for the Program Evaluation Division, CMHC 1986. (Report estimates from .04 to 1.0 per cent of housing built prior to 1920 has heritage designation status.)

TABLE D.1
DESIGNATED HERITAGE HOMEOWNER PROPERTIES
BY YEAR OF CONSTRUCTION AND REGION

	ALL HOMEOWNER DWELLINGS			HOMEOWNER DWELLINGS CONSTRUCTED BEFORE 1920		
	INCIDENCE (%)	DIST'N (%)	(n)	INCIDENCE (%)	DIST'N (%)	(n)
CANADA	2.1	100.0	163	4.6	100.0	28
REGION						
Atlantic	2.2	10.4	43	3.9	14.3	11
Quebec	5.4	50.2	65	10.2	37.9	8
Ontario	1.1	20.5	15	9.0	33.5	4
Prairie	1.4	12.8	27	1.6	5.8	2
B.C.	0.9	6.1	13	2.3	8.6	3

SOURCE: National Housing Study, CMHC, 1986.

NOTE: There were 13 rental properties designated as heritage, all of which were constructed before 1920.

Heritage designation is a legal status assigned by municipal bylaw or by provincial order-in-council which allows government to place restrictions on property use and development. There is significant variation in the strength and scope of this type of public involvement between jurisdictions. Ontario has an active program where designation places the lightest restrictions on owners. It is also a prerequisite for certain renovation subsidies. In British Columbia, the government is obligated to compensate owners in return for designation.

Because of the small number of heritage dwellings in the National Housing Study sample, detailed analysis is not statistically reliable. However, heritage designation appears to be positively related to good housing conditions, the percentage of owners renovating and the amount they spend, and neighbourhood quality. As shown in Table D.2, from 73 to 80 per cent of the heritage properties require only minor repair or on-going maintenance. Almost 60 per cent of heritage property owners did renovation work in 1985 and close to 48 per cent spent over $10,000 on the work done. More than one-half of heritage property owners rated their neighbourhood quality as excellent. Together, these measures suggest that heritage designation has had positive, measurable impacts on housing conditions, overcoming the market problem of a lack of heritage awareness or the underestimation of its benefits which may have otherwise inhibited owners.

TABLE D.2
COMPARISON OF PROPERTY CHARACTERISTICS,
OWNER RENOVATION BEHAVIOR AND NEIGHBOURHOOD QUALITY
FOR PRE-1920 HERITAGE AND NON-HERITAGE PROPERTIES

CHARACTERISTICS	HERITAGE(1) PROPERTIES		NON-HERITAGE PROPERTIES	
	OCCUPANT (%)	EXPERT (%)	OCCUPANT (%)	EXPERT (%)
NEED FOR REPAIR				
Major Repair	20.2	27.5	19.6	44.2
Minor Repair	16.9	5.5	33.1	24.3
Maintenance	62.9	67.1	47.3	31.4
Number of Cases	28	8	571	122
RENOVATION WORK DONE IN 1985	58.7		54.2	
Number of Cases	12		245	
COST OF RENOVATION WORK DONE IN 1985				
Under $ 500	15.4		18.0	
$ 500 - $ 999	12.0		9.2	
$ 1 000 - $ 1 499	4.9		9.4	
$ 1 500 - $ 1 999	0.0		9.1	
$ 2 000 - $ 4 999	20.2		27.5	
$ 5 000 - $ 9 999	0.0		15.3	
$10 000 plus	47.5		10.7	
Number of Cases	9		232	
NEIGHBOURHOOD QUALITY				
Level on 4(average)	19.1		34.2	
7-point 5	11.8		17.4	
scale 6	16.5		16.8	
7(excellent)	52.5		19.6	
Number of Cases	27		559	

SOURCE: National Housing Study, CMHC, 1986.

NOTES: 1. "Heritage" refers to housing recognised, listed or registered as a potential heritage property, or designated as a heritage property by the local, regional, provincial or federal government.

1. Skills and Information Required for Heritage Conservation Work

If heritage-sensitive renovation is to be encouraged, heritage property owners must be able to recognize the special needs of designated buildings and to undertake the necessary work in a skillful and cost-effective manner. Unless owners or the public agencies legally empowered to influence property development already possess the technical ability to specify the required renovation and are themselves skilled in construction, the full potential of the designation process in encouraging heritage conservation work may not be realized.

A recent study of the impact of government involvement in the heritage area concluded that the amount of related renovation work is, in fact, significantly below its full potential.[1] It assessed the property development-related public agencies, with the exception of Parks Canada at the federal level, the heritage branches of provincial ministries of culture and a "handful" of municipal planning departments, as being in need of a better awareness themselves of the development requirements of heritage properties and staff trained in conservation-related skills.

Data are not available on the level of information/skills possessed by heritage property owners. However, as shown in Table D.3, the National Housing Study provides information on the use and usefulness of various information sources. Over 86 per cent of heritage property owners who renovated in 1985 ranked "Professional Advice" as a "useful" to "extremely useful" information source, with "word-of-mouth" and "personal experience" ranked second and third. "Personal experience" was ranked by a greater percentage of non-heritage homeowners as being useful to extremely useful. Another important insight into the information requirements of heritage renovators is the apparent lack of utility of written material or training courses. In the latter case, training courses were not found useful by any of the heritage property owners included in the survey.

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[1] Commonwealth Historic Resource Management Limited, Government Involvement in Residential Renovation, a report prepared for the Program Evaluation Division, CMHC 1986.

TABLE D.3
HOMEOWNER ASSESSMENTS OF USEFULNESS OF RENOVATION INFORMATION SOURCES FOR PRE-1920 HERITAGE AND NON-HERITAGE PROPERTY RENOVATORS

SOURCE OF INFORMATION	HERITAGE		NON-HERITAGE	
	USED (%)	USEFUL(1) (%)	USED (%)	USEFUL(1) (%)
Training Courses	46.5	0.0	21.0	22.9
Pamphlets	57.1	18.6	50.3	44.7
Personal Experience	98.1	71.4	85.8	79.9
Word-of-Mouth	79.6	81.9	70.7	61.9
Professional Advice	95.9	86.5	62.4	72.5
Number of Cases	13		420	

SOURCE: National Housing Study, CMHC, 1986.

NOTES: 1. Proportion of users assessing source as "useful" to "extremely useful": levels 5 to 7 on 7 point scale.

2. Cost, Financing of Heritage Conservation Work

Another potential stumbling block related to the heritage designation of a property is the higher cost of the work, and the associated impact on financing requirements.

The cost of heritage conservation work is generally higher than other types of renovation for three reasons. First, heritage-sensitive renovation implies extra attention to aesthetic detail, which may involve additional costs over and above renovating for health and safety. Second, the development approval process is more complex than for non-heritage types of renovation. Buildings are subject to an additional review process, normally involving a municipal heritage advisory committee, prior to the granting of a work permit.

Third, building codes may increase the cost of heritage conservation work. They have been cited in the higher costs of renovation work previously because of their prescriptive basis requiring conformance to the standards for new materials and construction methods. Under the system of equivalences being introduced both under the National Building Code and under some provincial codes, the retention of original materials such as

wet-plaster walls and panelled doors for example, would be possible. The cost of renovation would be lower without compromising health or safety codes.

Concerning the financing of work on pre-1920 heritage properties, personal savings, the most popular source for financing work, is followed by loan financing to a greater extent for heritage property renovators than for non-heritage renovators. As shown in Table D.4, half of the heritage property owners who renovated in 1985 relied on bank financing, compared to less than 30 per cent of non-heritage property owners.

TABLE D.4
COMPARISON OF FUNDING SOURCES, AND INCOME FOR PRE-1920 HERITAGE AND NON-HERITAGE PROPERTY RENOVATORS

CHARACTERISTICS	HERITAGE PROPERTIES (%)	NON-HERITAGE PROPERTIES (%)
FUNDING SOURCES FOR RENOVATION WORK	(INCIDENCE)	(INCIDENCE)
Savings	100.0	96.6
Bank Loan	52.7	29.8
Loan From Friend	22.1	13.5
RRAP(1)	0.0	6.6
CHIP(2)	0.0	12.0
Other Gov't Prog.	22.1	7.1
Number of Cases	15	333
INCOME OF PROPERTY OWNER	(DISTRIBUTION)	(DISTRIBUTION)
Less than $25 000	24.6	39.2
$25 000-49 999	26.5	39.5
$50 000-99 999	27.5	17.4
$100 000-149 999	21.4	3.4
$150 000 and more	0.0	0.6
Number of Cases	21	456

SOURCE: National Housing Study, CMHC, 1986.

NOTES: 1. Residential Rehabilitation Assistance Program, CMHC

2. Canadian Home Insulation Program, Energy Mines and Resources (EMR)

There is a difference in the availability and type of government renovation assistance which possibly account for the difference in the use of debt financing between heritage and non-heritage property owners. As noted, loan financing is used by less than 29 per cent of non-heritage property owners likely because their use of RRAP and CHIP assistance helped to defray the cost of the work. No heritage renovators used RRAP or CHIP, although 22.1 per cent accessed other government financing.

From a review of property owner incomes, it is apparent that a greater percentage of heritage renovators are represented among the higher income levels compared to non-heritage renovators. This difference in income distribution supports the notion that when this type of renovation is more costly, heritage conservation is somewhat restricted to middle to upper income households.

3. Perception of Neighbourhood Quality

In addition to the designation of individual properties, governments also specify heritage districts or areas, to protect a collection of heritage sites. At the same time, to be fully effective, it must result in collective heritage conservation activity by member property owners.

The designation process itself may generate some level of owner confidence and increase renovation activity. In several cities, municipal governments have put in place different kinds of area-related incentive mechanisms: plaques, public awareness campaigns, public works projects to improve neighbourhood amenities, design guidelines, and relaxation of zoning bylaw restrictions on building use.[1]

The extent to which one government mechanism has been more effective in promoting area conservation than another has not been tested. But, recent survey evidence indicates that the procedures in place may, in total, have helped spur greater overall confidence in the neighbourhoods with heritage property. Over one-half of heritage property owners surveyed in the National Housing Study report the highest level of satisfaction with the quality of their neighbourhood compared to less than 20 per cent of non-heritage property owners. The Commonwealth Historic Resource Management group reports that

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[1] Heritage Conservation and Its Linkages with Residential Renovation, Program Evaluation Division, CMHC, 1985 (cited from S.B. Lazear, Municipal Heritage Planning in Canada).

such a perception is not uncommon, reflecting increased investor confidence that is associated with "trendy" renovated areas.[2]

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[2] Commonwealth Historic Resource Management Group, Government Involvement in Residential Renovation, a report prepared for the Program Evaluation Division, CMHC, 1986, p.8.

APPENDIX E
FACTORS INFLUENCING RENOVATION ACTIVITY

In order to determine the variables which significantly influence renovation activity, regression analyses were used, specifically logistic regressions. A logistic regression model is similar to a typical multiple regression model in that both involve an implicit asumption of causality through the estimation of a statistical relationship between the dependent variable (the variable to be explained or predicted) and a group of independent variables (the 'causal' variables). The basic difference between the two statistical techniques is that a multiple regression model is estimated with a continuous dependent variable, while a logistic regression is estimated with a discrete dependent variable. Because of this difference, the interpretation of the regression coefficients are not the same. While in the multiple regression model, the coefficient on a independent variable measures the change in the dependent variable with a unit change in the independent variable, the coefficients in a logistic regression relate to probabilities or odds of a certain outcome (as represented by the discrete dependent variable) occurring.

In addition to the following logistic regressions, various multiple regression models were used. However, the logistic regression model provided a better fit for the data and therefore is presented.

Homeowners

The dependent variable used in this analysis was ANYRENOV. It is a binary variable taking on the value of 1 if a homeowner undertook renovation activity in 1985 and 0 otherwise. A number of independent variables were also used in the model. However, only a few proved to be statistically significant.

The following model includes selected independent variables, their significance denoted by the chi-square statistic in brackets.

ANYRENOV =	.477INTERCEPT +	.005BLDAGE +	.139DIF -	.085LIVE +
	(9.62)	(18.27*)	(18.21**)	(17.25**)

.001HHINCOME -	2.83TXPRATIO -	.106REPAIR +	.001SELPRICE
(16.43**)	(12.85**)	(5.27*)	(0.34)

n = 6340 Likelihood Ratio Test Statistic = 7528**

* significant at the 95% level.
** significant at the 99% level.

ANYRENOV = any maintenance, repairs or improvements done in 1985

BLDAGE = age of the homeowner's dwelling in years

DIF = the change in the quality of facilities and services in the neighbourhood from 1980 to 1985 (index range is -7 to +7)

LIVE = the number of years homeowner has lived in dwelling

HHINCOME = total household income in 1985 (current $)

TXPRATIO = ratio of total annual property taxes to value of dwelling in 1985

REPAIR = The condition of the dwelling (ie. whether major repairs, minor repairs of regular maintenance is required). Values are 1, 2 and 3 respectively.

SELPRICE = approximate selling price of dwelling if it were to be sold in 1986

The independent variables are listed in the order of their significance. The variables AGE, DIF, LIVE, HHINCOME and TXPRATIO are significant at the 99% level, the variable REPAIR significant at the 95% level and the variable SELPRICE insignificant even at the 90% level.

The variables AGE, DIF, and HHINCOME are positively related to renovation activity. The older the building, the greater the increase in neighbourhood quality, and the higher the income, the greater will be the incentive to renovate. The variables LIVE, TXPRATIO and REPAIR are negatively related to renovation activity. The longer the household has resided in the dwelling, the higher the taxes to house value and the better the condition or repair of the dwelling, the lower will be renovation activity.

Landlords

The dependent variable in the landlords' case was LANYRENO. Again a binary variable taking on the value of 1 if the landlord undertook renovation activity in 1985 and 0 otherwise.

The following model includes selected independent variables, closely resembling those used in the homeowners' case. The significance of the variables is denoted by the chi-square statistic in brackets.

LANYRENO = .257INTERCEPT - .330REPAIR + .005PERCENT + .006BLDAGE
(.73) (16.3**) (8.83**) (8.73**)

+ .093LPRESENT - .005LIVE + .001UNTPRICE - 1.5TXPRATIO
(5.33*) (.70) (.39) (.62)

n = 507 Likelihood Ratio Test Statistic = 2122**

* significant at the 95% level
** significant at the 99% level

LANYRENO = any maintenance, repairs or improvements done in 1985

REPAIR = the condition of the dwelling (i.e. whether major repairs, minor repairs or regular maintenance is required). Values are 1, 2 and 3 respectively.

PERCENT = percentage of total investments/ assets the building represents

BLDAGE = the age of the building in years

LPRESENT = present quality of neighbourhood facilities (1985) on a scale of 1 to 7

LIVE = the number of years the landlord has owned the building

UNTPRICE = ratio of value of dwelling to number of units in dwelling

TXPRATIO = ratio of total annual property taxes to value of dwelling (i.e. effective tax rate)

The independent variables are listed in the order of their significance. A somewhat different group of variables proved significant in the landlords' case. The variable REPAIR was highly significant as were PERCENT and BLDAGE. LPRESENT was significant at the 95% level and the remaining variables were not significant. All variables have the expected sign.

Of interest is the strong significance of the REPAIR variable. It seems that landlords' renovation decisions are more linked to the state of repair of the dwelling than homeowners. Also of interest is the fact that present quality of neighbourhood facilities was more significant than the difference in neighbourhood quality (the opposite was the case for homeowners). This occurrence supports the externality/ neighbourhood effects hypothesis discussed in chapter IV.

APPENDIX F
DESCRIPTION OF CURRENT AND RECENT FEDERAL INITIATIVES

1. Residential Rehabilitation Assistance Program (RRAP) (1973 - ongoing)

The Residential Rehabilitation Assistance Program was introduced in 1973, along with the Neighbourhood Improvement Program (NIP), to provide funding for improvements to the public infrastructure and the existing housing stock in selected low-income neighbourhoods. Through RRAP, homeowners and landlords are eligible to receive assistance for repairs required to bring the dwelling up to a minimum standard of health and safety.

In 1974 the program was extended to rural areas as a component of the Rural and Native Housing Program. In 1981, repairs to increase the accessibility of a unit for a disabled occupant became eligible for inclusion and separate RRAP for the Disabled provisions were introduced in 1982.

In 1986, RRAP became a component of the federal/provincial social housing policy. As such, all assistance must be targetted to households in core housing need. All households with a disabled member are eligible for RRAP for the Disabled in recognition of the increased shelter costs incurred by these households.

Assistance is provided in the form of a loan, a portion of which may be forgivable and may not have to be repaid. The forgiveness is 'earned' over a period of years by continuing to own and occupy or rent the dwelling. For homeowners, the maximum loan amount is $10,000 in urban areas and $25,000 in rural areas. The amount of available forgiveness is determined by the household income and can be up to $5,000 in southern areas of the country, $6,250 in near northern areas and $8,250 in far northern areas.

For rental units the loan is fully forgivable and the maximum available is determined by the relationship between the post-rehabilitation rent and the average market rent for similar units. The maximum forgiveness available is $17,000 per self-contained unit and $8,500 per hostel bed. Prior to 1986, the rental RRAP forgiveness was not based on the unit rent level and was the lesser of $3,500 per unit ($2,500 per bed) or one-half of the cost of repairs.

RRAP is delivered by agents on behalf of CMHC or a federal/provincial partnership. Agents are responsible for inspecting the dwelling, determining the eligible work and the amount of forgiveness and monitoring the work in progress and are paid a delivery fee.

The objectives of the 1986 programs are:

Homeowner - to assist households in core housing need who own and occupy existing substandard housing, to repair, rehabilitate and improve their dwellings to a minimum level of health and safety.

Rental - to assist households in core housing need occupying existing substandard rental housing by providing assistance to the owners to repair, rehabilitate and improve the dwellings to a minimum level of health and safety.

Disabled - to assist in the repair, improvement or modification of existing homeowner or rental housing to improve the accessibility of the dwelling unit for a disabled occupant.

The objectives of the pre-1986 program were:

to provide assistance to residents living in substandard housing on the basis of need;

to improve substandard housing to an agreed level of health and safety;

to ensure that the quality of repair and improvement substantially extends the useful life of the dwelling; and

to promote an acceptable level of maintenance of the existing housing stock.

2. Canada Home Renovation Plan (CHRP) (May 1982-July 1983)

In response to the high levels of unemployment during the 1980's, the federal government initiated a series of measures designed to generate employment. One of the two assistance programs introduced by CMHC was the Canada Home Renovation Plan (CHRP). CHRP provided assistance to over 120 000 homeowners undertaking a wide range of residential renovations.

Assistance was available in the form of a forgivable loan. The loan, for up to $3 000, would cover up to 30 per cent of the cost of eligible repairs, alterations or improvements. At least one third of the renovation cost had to be paid for contracted labour. The repairs or alterations had to be permanently installed in the units. Certain items, such as saunas, pools, fences and driveways were ineligible as were improvements or repairs which qualified under other government programs such as

the Canadian Home Insulation Program (CHIP) or the Canada Oil Substitution Program (COSP).

The maximum loan was available to households earning $30,000 or less and undertaking renovations of at least $10,000. The maximum loan amount decreased by 5 per cent for each $1,000 of income above $30,000. Households became ineligible when household income reached $48,000. The forgivable loan was fully earned by continuing to own and occupy the dwelling for one year following the date of payment.

CHRP was designed to be an employment stimulation program. Its primary objective was to create jobs through the stimulation of the residential construction sector. The vehicle used to create jobs was residential renovation and thus, the program had an impact on renovation activity and housing quality.

3. Home Improvement Loans Program (1954-1986)

CMHC began guaranteeing Home Improvement Loans under Part IV of the NHA in 1954. The loans, from private lenders, were intended to finance a wide variety of permanent home improvements. The maximum loan amount was $2 500. This was increased to $4 000 in 1962 and subsequently to $10 000 in 1979. The program had two objectives:

to help improve and rehabilitate the housing stock and to extend its useful life span; and

to encourage lenders to finance home improvements.

Take-up of the program accelerated rapidly to almost 40 000 loans per year by 1959 and then gradually declined during the 1960's. Reasons put forward for the decline included the perceived complexity of the program by borrowers and lenders alike, an interest rate ceiling imposed by the Bank Act and a $4 000 limit on the maximum loan amount. The decline continued during the 1970's following the introduction of RRAP until fewer than 5 000 loans were being insured per year. In 1979 major changes were introduced in an attempt to stimulate take-up of the program. These included an increase in the maximum loan amount to $10 000, a reduction in the minimum term to three years and the freeing of the interest rate to be set at market rates by the lender making the loan. In spite of these changes, take-up did not improve and the lack of activity during the 1980's resulted in the termination of the program in 1986. Nevertheless, over 450 000 dwellings were improved during the life of the program.

**4. Emergency Repair Program (ERP)
(Rural and Native Housing Program (RNH))
(1974 - ongoing)**

The Emergency Repair Program was initiated in 1974 as part of the Rural and Native Housing Program. The overall RNH program was established to provide new housing and renovation assistance for low-income Native and non-Native people living in rural off-reserve areas. ERP is intended for rural dwellings which cannot be brought up to minimum standards for RRAP but which, when emergency work is carried out, are still liveable.

The emergency repair program provides a one-time grant to make essential health and safety repairs. The grant is equal to the cost of the work up to a maximum of $3 800 in the far north, $2 500 in the north and $1 500 in the rest of the country.

**5. Canadian Home Insulation Program (CHIP)
(1977 - 1986)**

The Canadian Home Insulation Program provided grants to property owners to upgrade the thermal efficiency of their dwelling. The program was initiated in 1977 to support the federal government's energy conservation objectives by reducing energy consumption for residential heating. While designed and funded by the Department of Energy, Mines and Resources, the program was delivered on a fee basis by CMHC.

The program provided grants, of up to $500, to cover 60 per cent of the cost of eligible activities. These included purchase and installation of insulation materials, weather-stripping, vapour barriers and attic vents. Contractors, if used, had to be listed in the Canadian General Standard Board National Certification Program for Residential Insulation Contractors. Prior to 1983, the program assistance was based on 100 per cent of materials cost to $350 and 30 per cent of labour cost to $150.

The specific objectives of the program were:

to reduce by at least 25 per cent the space heat consumption of existing dwellings; and

to help upgrade the thermal efficiency of at least 70 per cent of the existing housing stock.

**6. Canada Oil Substitution Program (COSP)
(1980 - 1985)**

As part of the national energy conservation strategy, the federal government encouraged the use of fuels other that oil.

The Department of Energy, Mines and Resources introduced the Canada Oil Substitution Program in 1980 to assist in the conversion of residential heating systems from oil to alternate fuels. The program was terminated in 1985.

The program was available to homeowners and landlords of existing buildings which had been constructed before 1980. Assistance was provided in the form of grants to cover 50 per cent of the cost of conversion. The alternate fuels were specified for each province and generally included natural gas, electricity and other renewable energy sources. In Newfoundland, Prince Edward Island and the two northern territories the program could also be used to reduce air leaks, insulate, increase the efficiency of oil furnaces as well as conversions to available alternate energy sources.

7. CMHC Information, Demonstration and Research Activities

Under Part V of the NHA, CMHC pursues a comprehensive and co-ordinated approach to housing research and information transfer in order to maintain national housing standards and promote housing quality improvements. In the area of renovation, CMHC activities fall under three categories: research, application and information transfer.

CMHC supports research directed towards the development of new techniques and approaches, the analysis of the renovation market and the development of improved measures of dwelling condition and need for repair. Application-oriented research supports the demonstration and testing of new techniques and materials and the promotion of good practice. CMHC supports the development of training courses and workshops. The production and distribution of material provides the means for CMHC to disseminate the results of this research to the renovation industry, the public and other interested groups. This includes the use of printed material, audio-visual material, exhibits and training courses.

8. NHA Mortgage Insurance for Renovations

Beginning in 1987, renovation costs became eligible for inclusion in second mortgages insured under the NHA. This initiative provides additional financing options for homeowners undertaking major renovations. This will be particularly useful in markets where house prices have made renovation an increasingly attractive alternative to moving. Second mortgage insurance is available to homeowners of single unit and duplex structures. The minimum insured loan amount is $10 000 for dwellings meeting prescribed conditions for existing financing.

9. Heritage Conservation Initiatives

The federal government's jurisdiction in residential heritage preservation is limited to the buildings it owns. Authority over most heritage buildings rests with the provinces which, in turn, have delegated it to the municipalities. Municipalities are involved both through their regulatory powers and through limited expenditure programs including renovation grants and property tax forgiveness. Private, non-profit foundations are also actively promoting the restoration and renovation of heritage properties. The Heritage Canada Foundation provides technical and organizational support to the property owners and municipal heritage conservation groups interested in preservation and restoration.

APPENDIX G
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